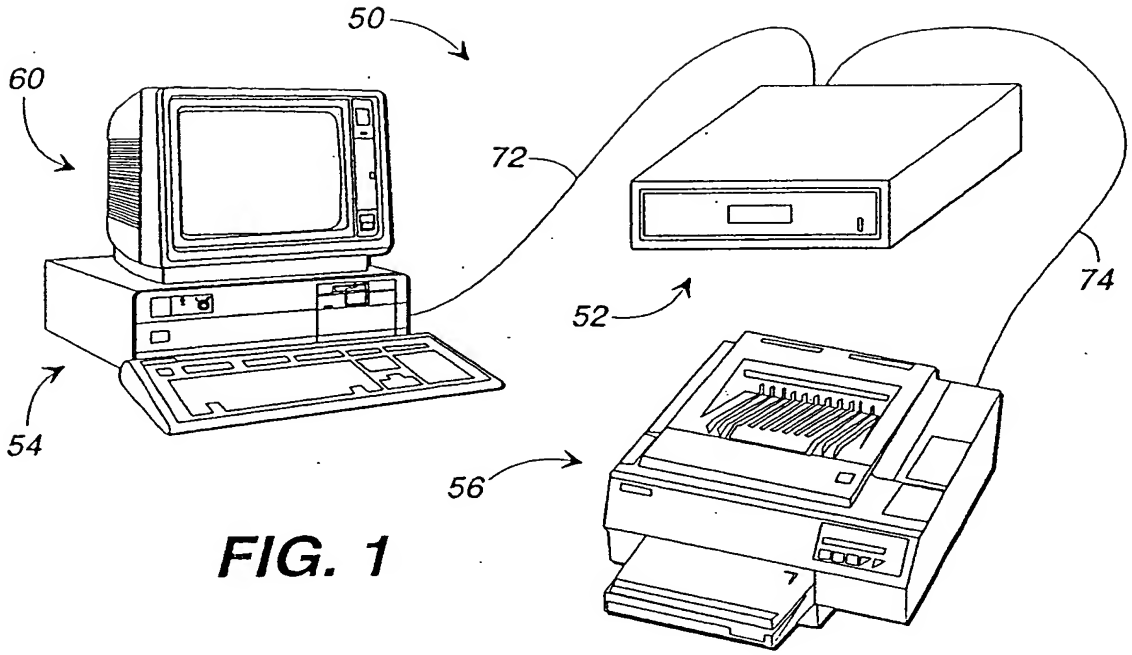


FIG. 1

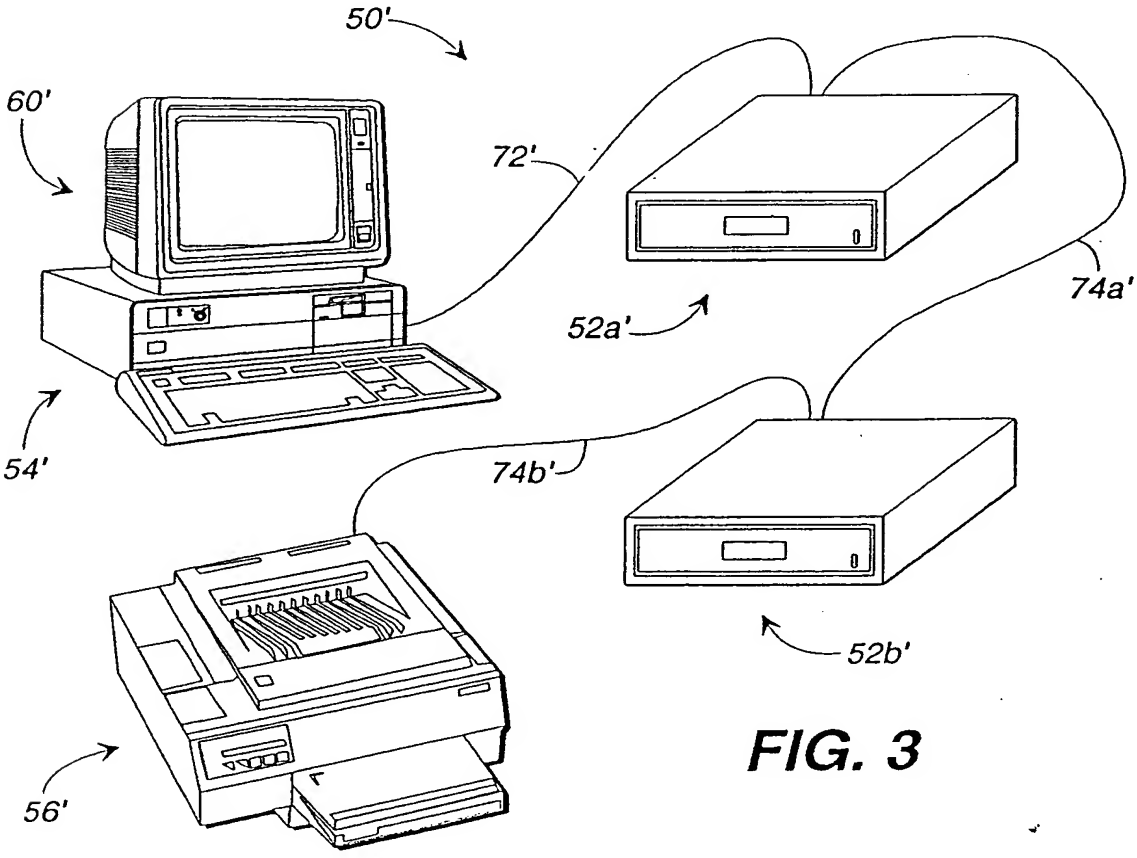


FIG. 3

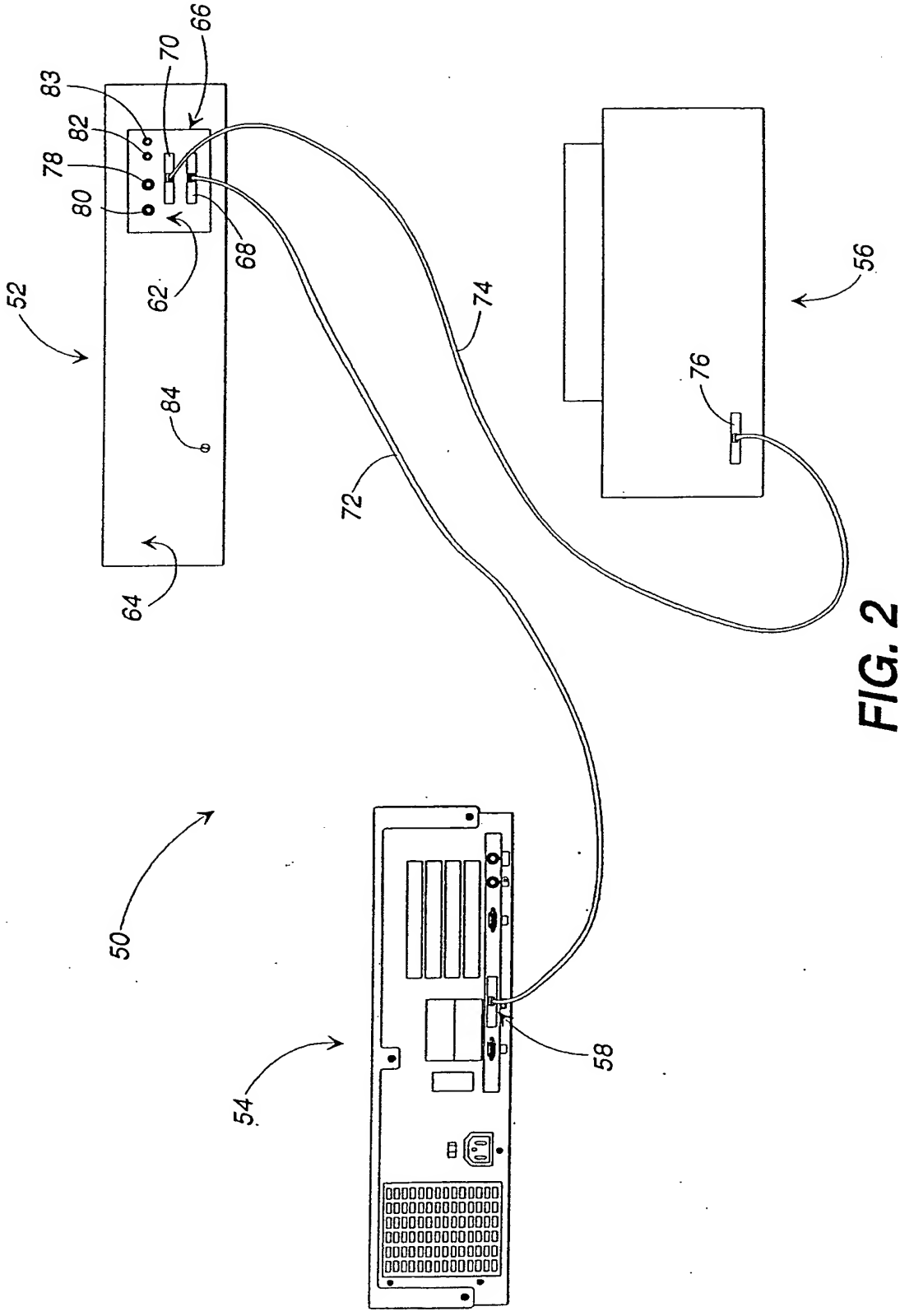


FIG. 2

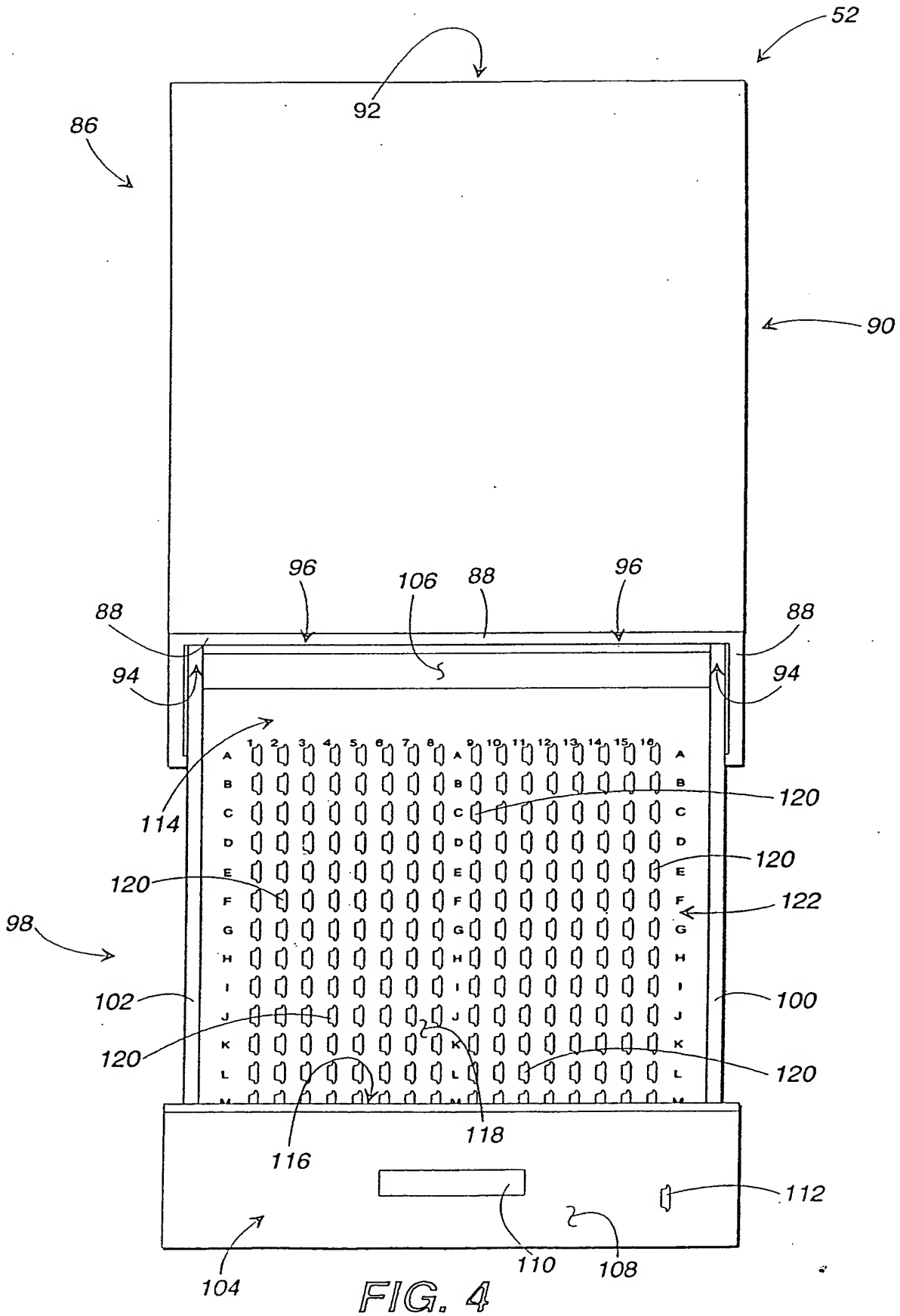

52
92
86
90
96
106
88
96
88
88
94
94
114
120
120
120
122
98
102
100
120
120
116
118
112
104
110
108

FIG. 4

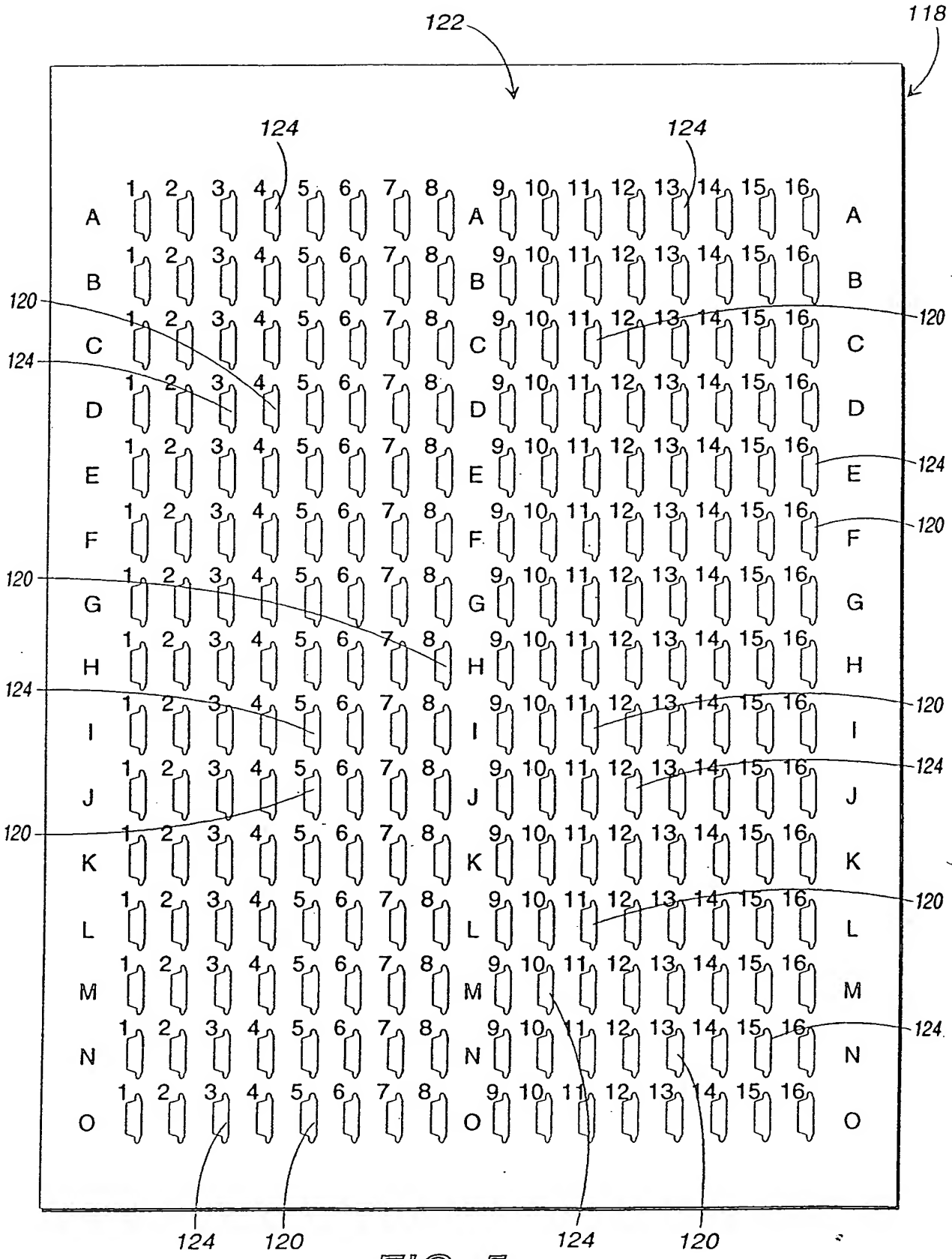

122
118
124
124
120
124
120
120
124
120
124
120
120
124
124
120
124
120

FIG. 5

FIG. 7

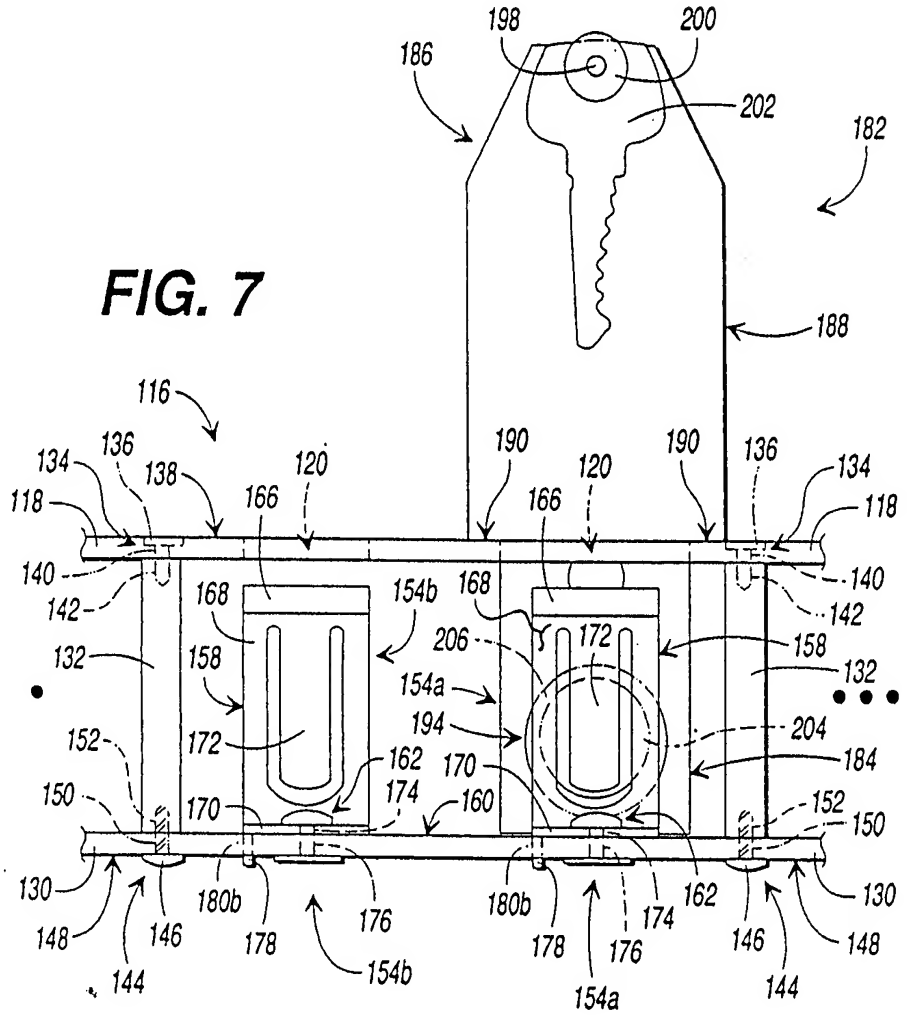
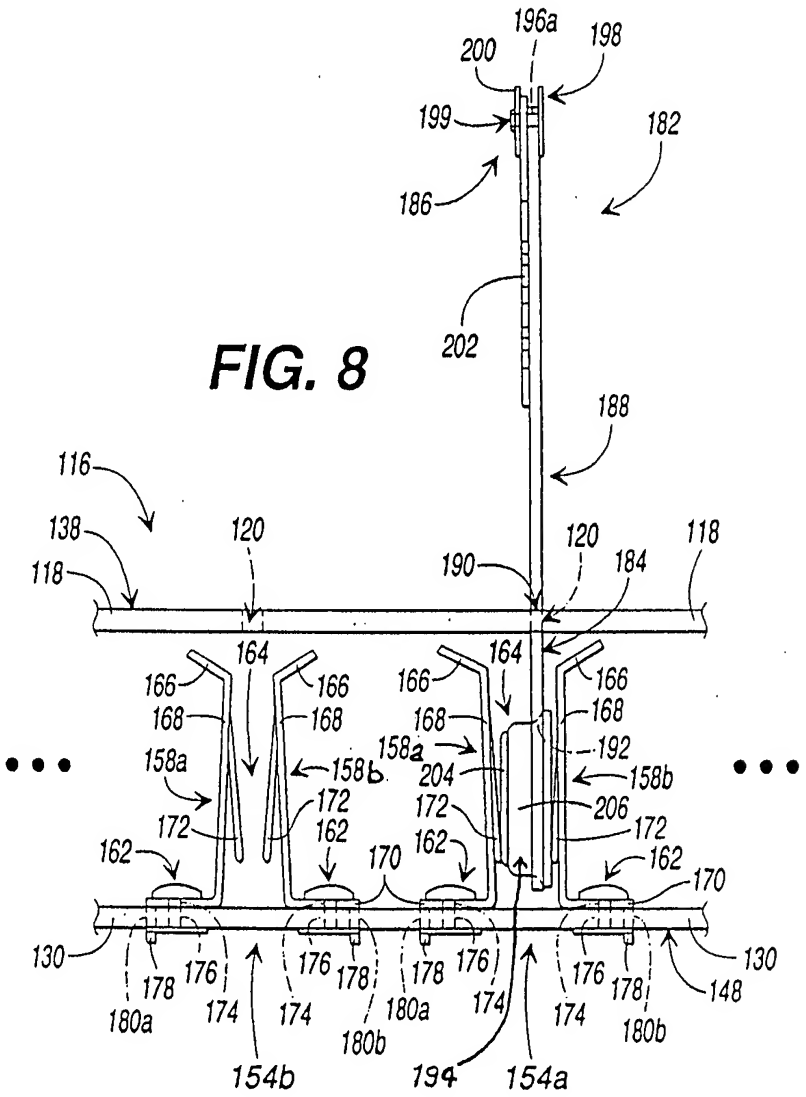

198
200
186
202
182
188
116
190
120
136
134
138
118
166
140
142
154b
168
206
172
158
132
154a
194
204
152
162
184
170
174
160
150
130
148
146
180b
178
176
144
154a

FIG. 8


196a
200
198
199
182
186
202
188
116
138
118
120
190
184
164
166
168
158a
158b
192
204
206
172
162
170
130
178
176
174
180a
180b
154b
194
154a

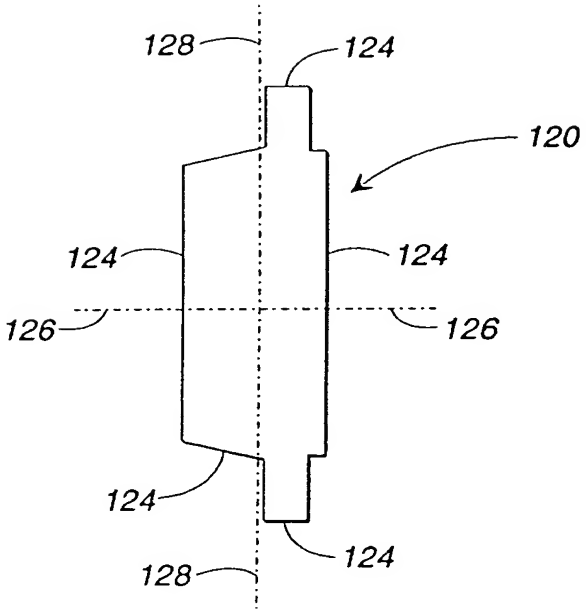


FIG. 6

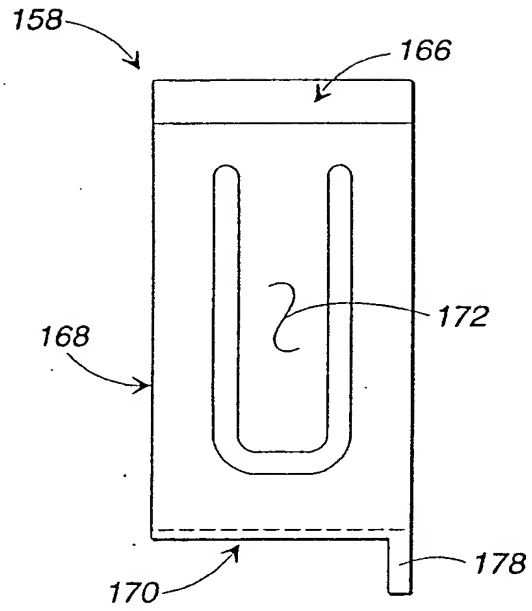


FIG. 9

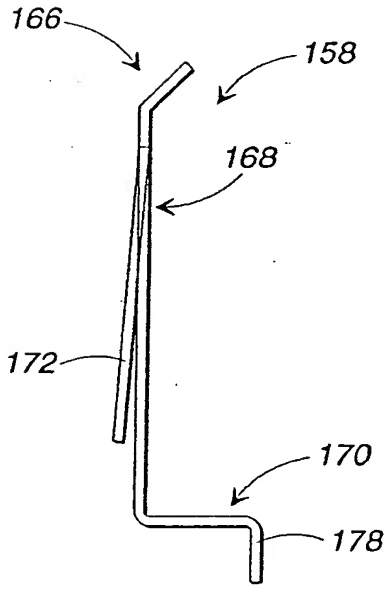


FIG. 10

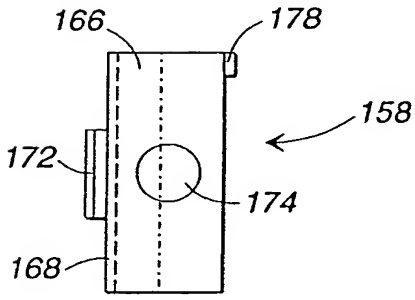


FIG. 11

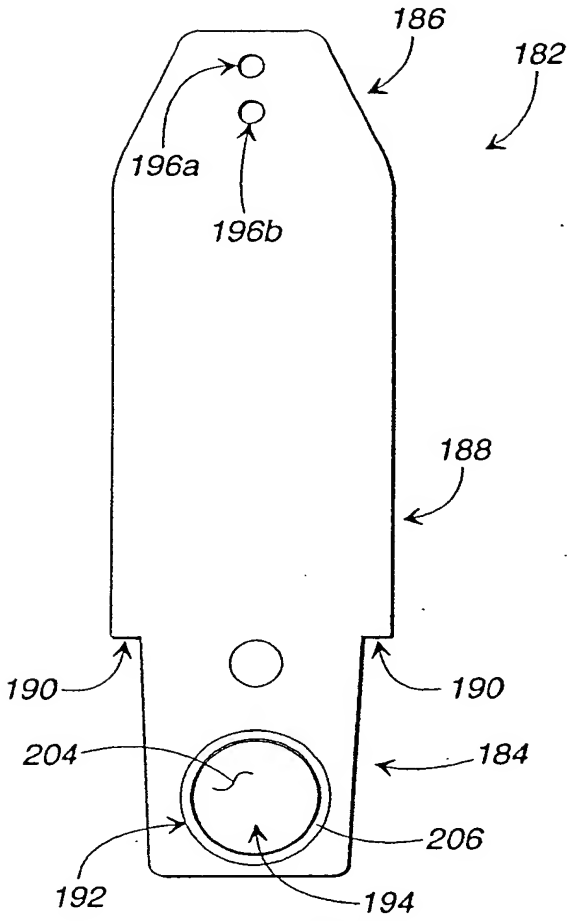


FIG. 12

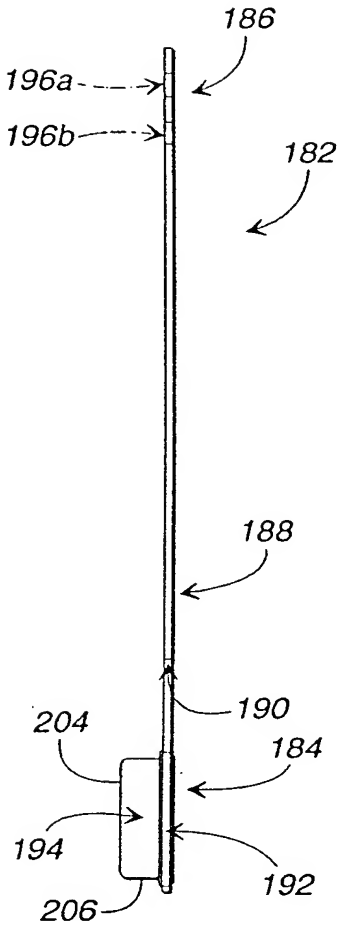


FIG. 13

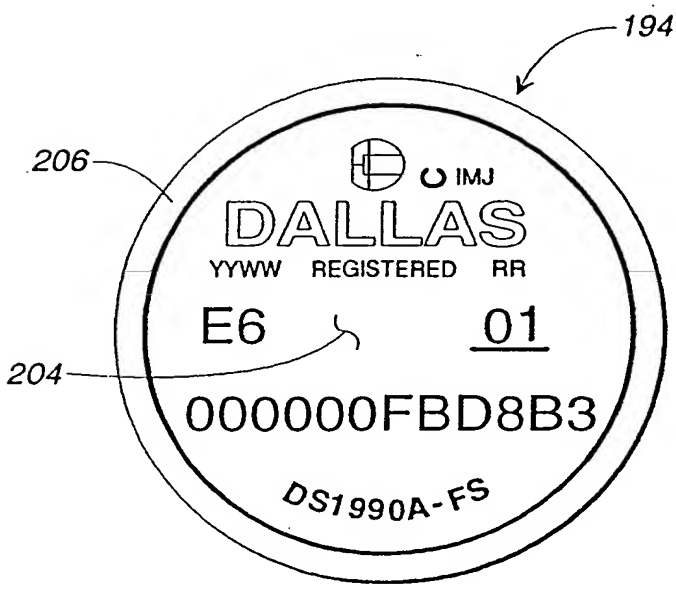


FIG. 14

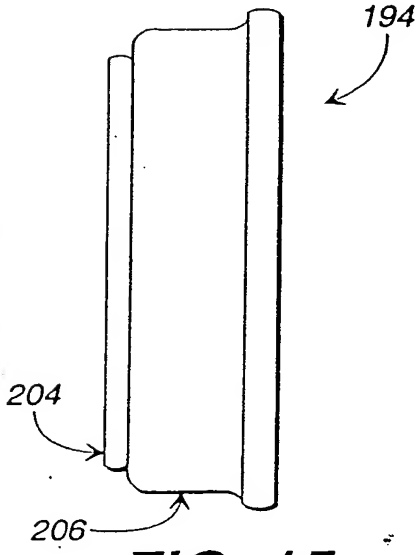


FIG. 15

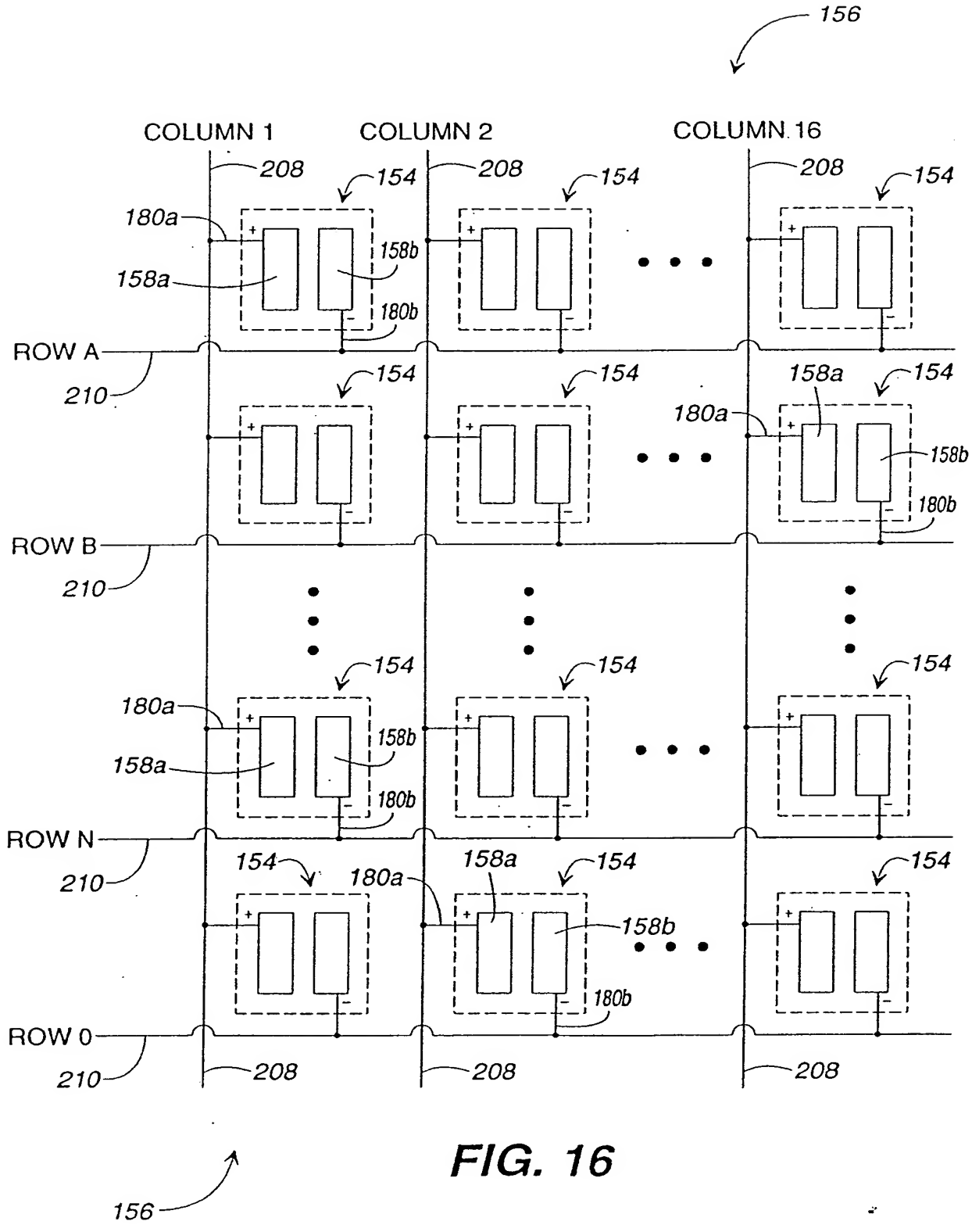

156
COLUMN 1
COLUMN 2
COLUMN 16
208
154
180a
158a
158b
180b
ROW A
ROW B
ROW N
ROW 0
210
156

FIG. 16

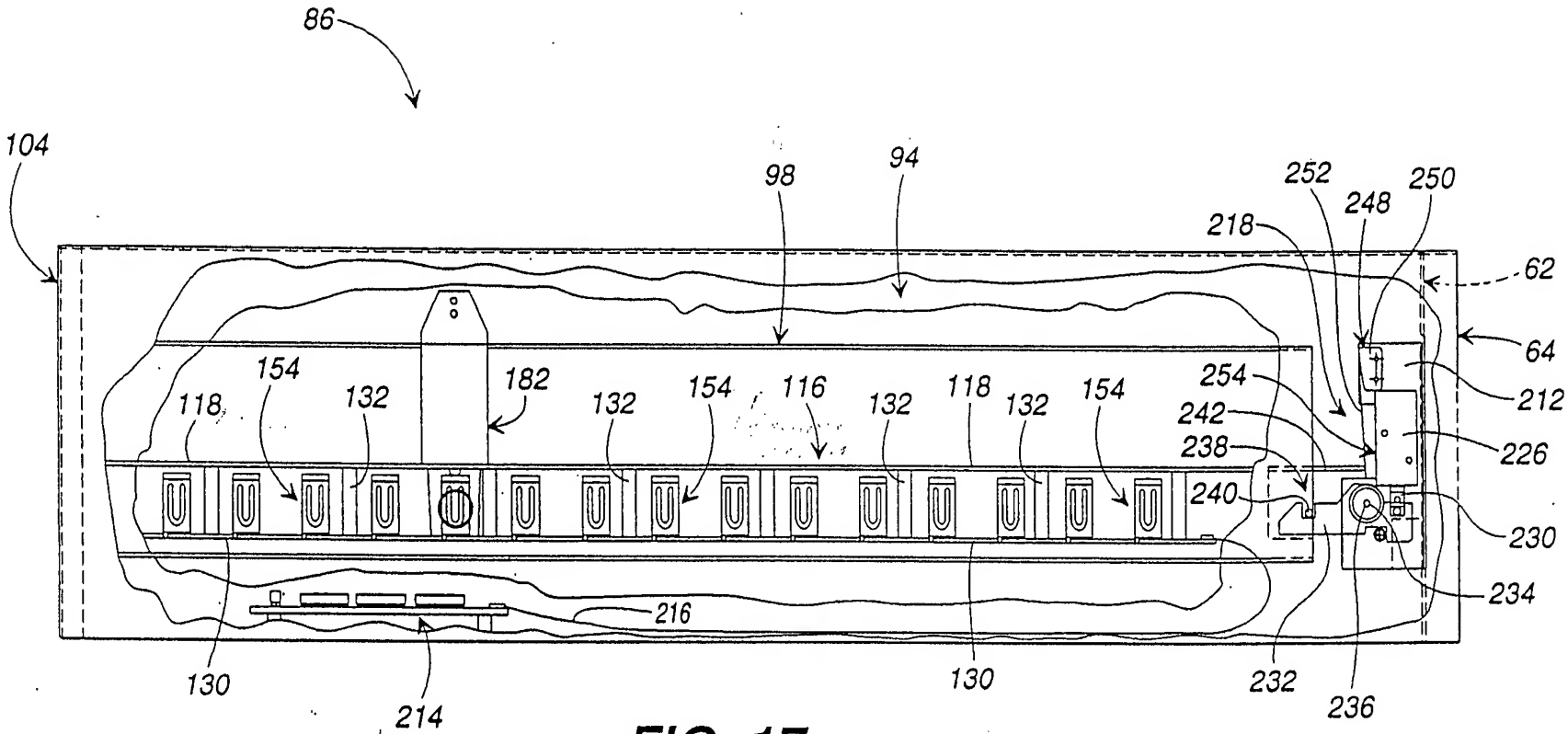

86
104
98
94
252
248
250
218
62
64
212
226
254
242
238
240
230
234
232
236
154
118
132
182
116
216
130
214

FIG. 17

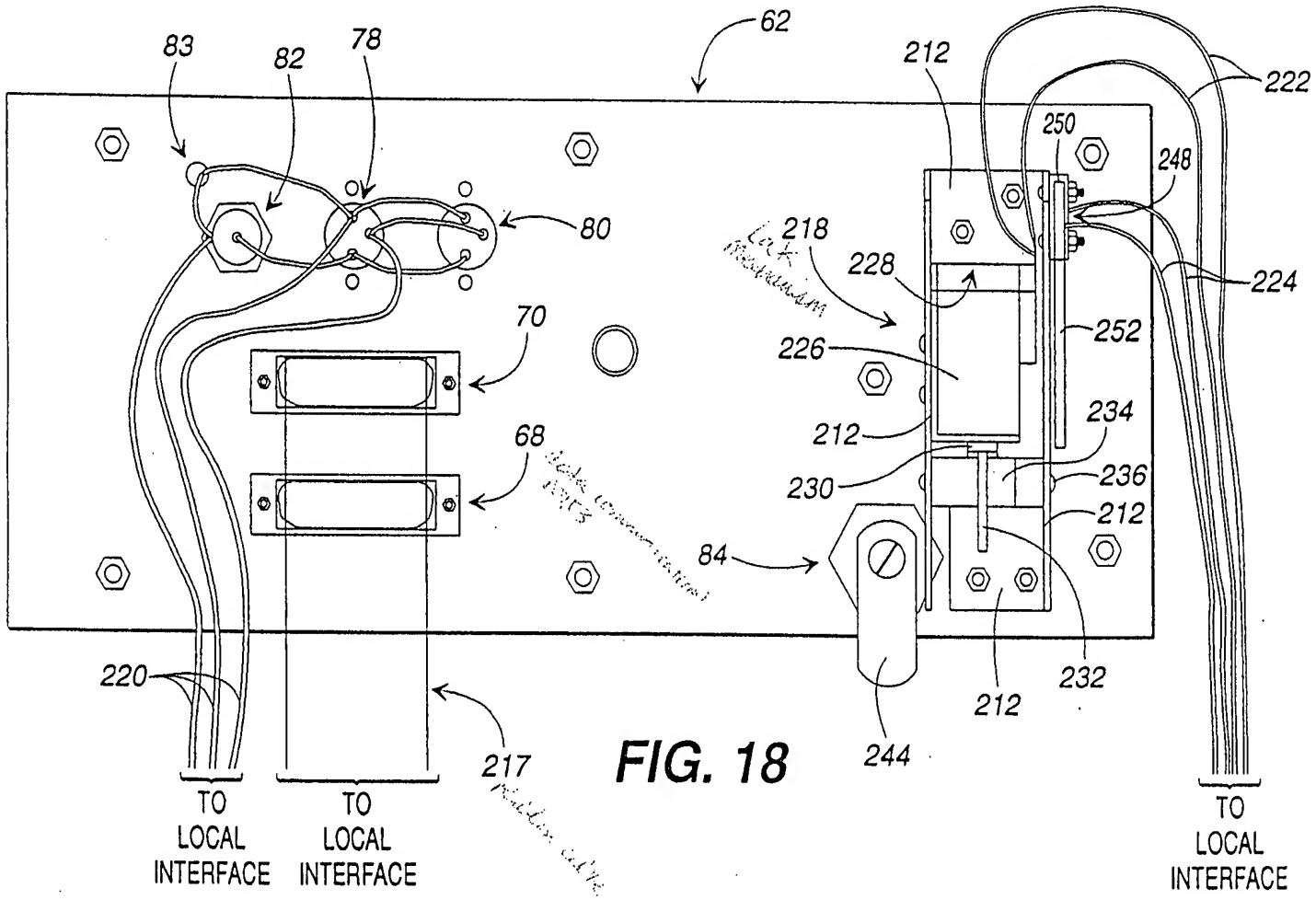

62
83
82
78
80
70
68
84
220
217
212
222
250
248
218
228
224
252
226
234
212
230
236
212
232
212
244
TO LOCAL INTERFACE
TO LOCAL INTERFACE
TO LOCAL INTERFACE

FIG. 18

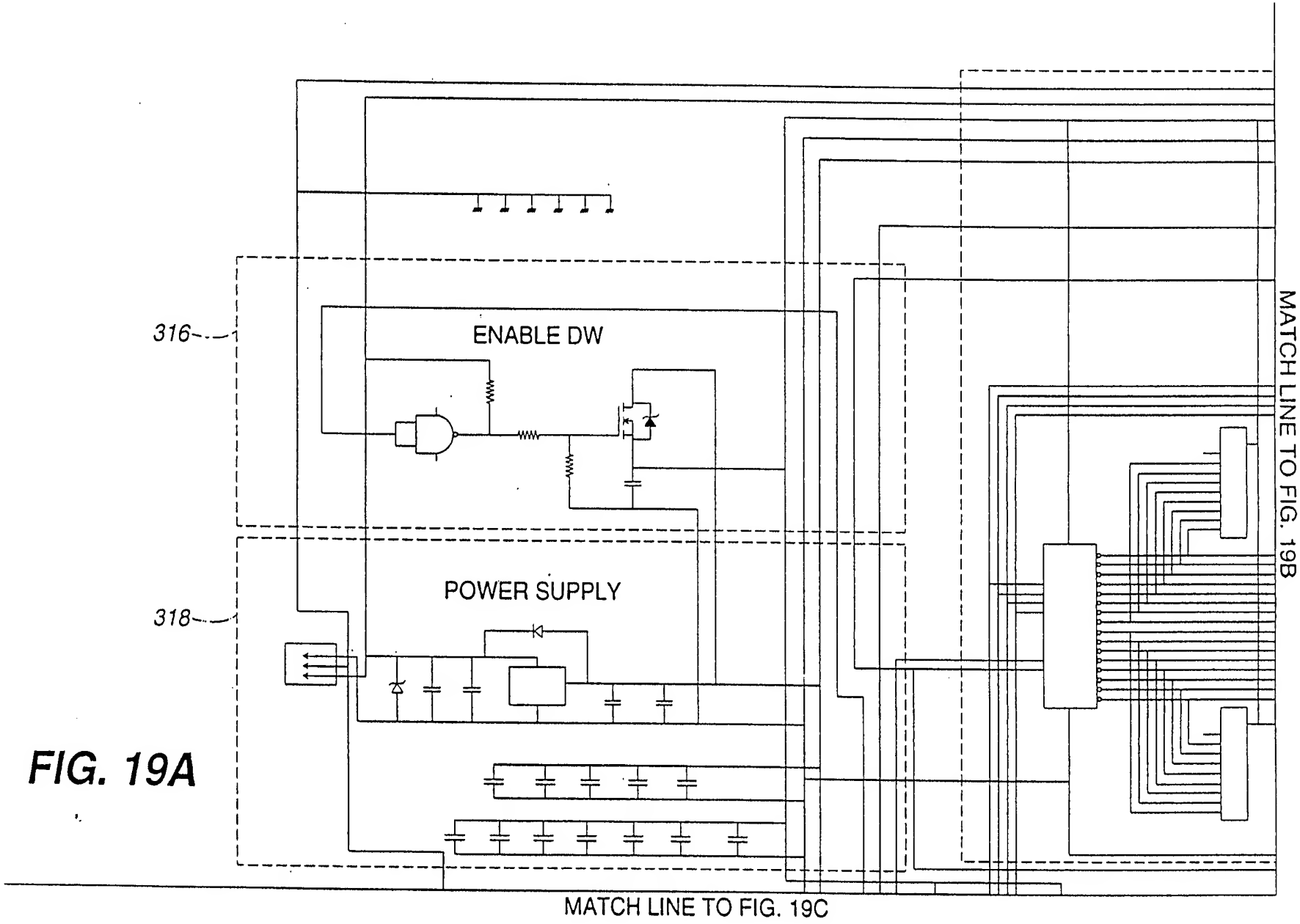

316
ENABLE DW
318
POWER SUPPLY
MATCH LINE TO FIG. 19B
MATCH LINE TO FIG. 19C

FIG. 19A

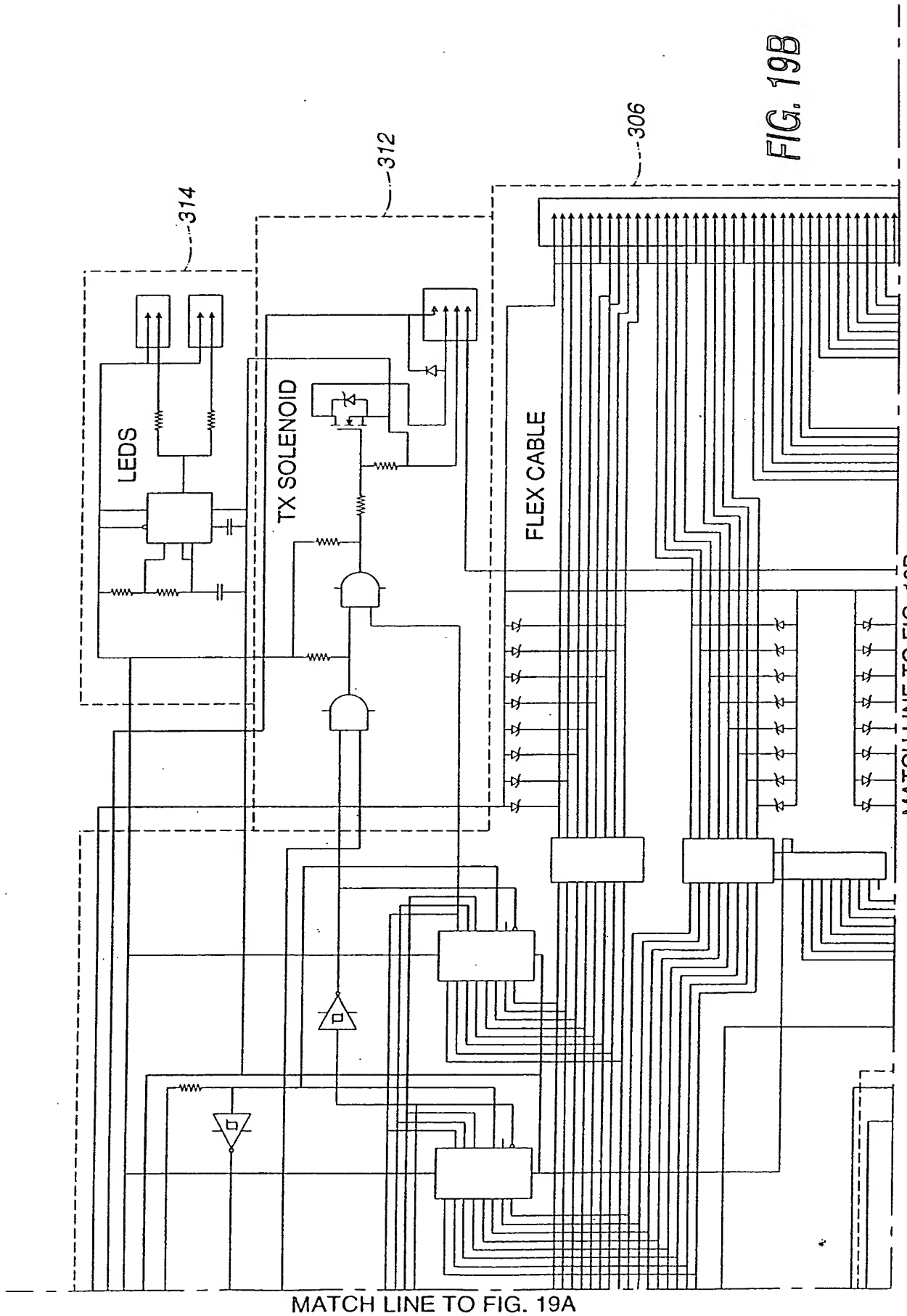

314
312
306
LEDS
TX SOLENOID
FLEX CABLE
MATCH LINE TO FIG. 19D
MATCH LINE TO FIG. 19A

FIG. 19B

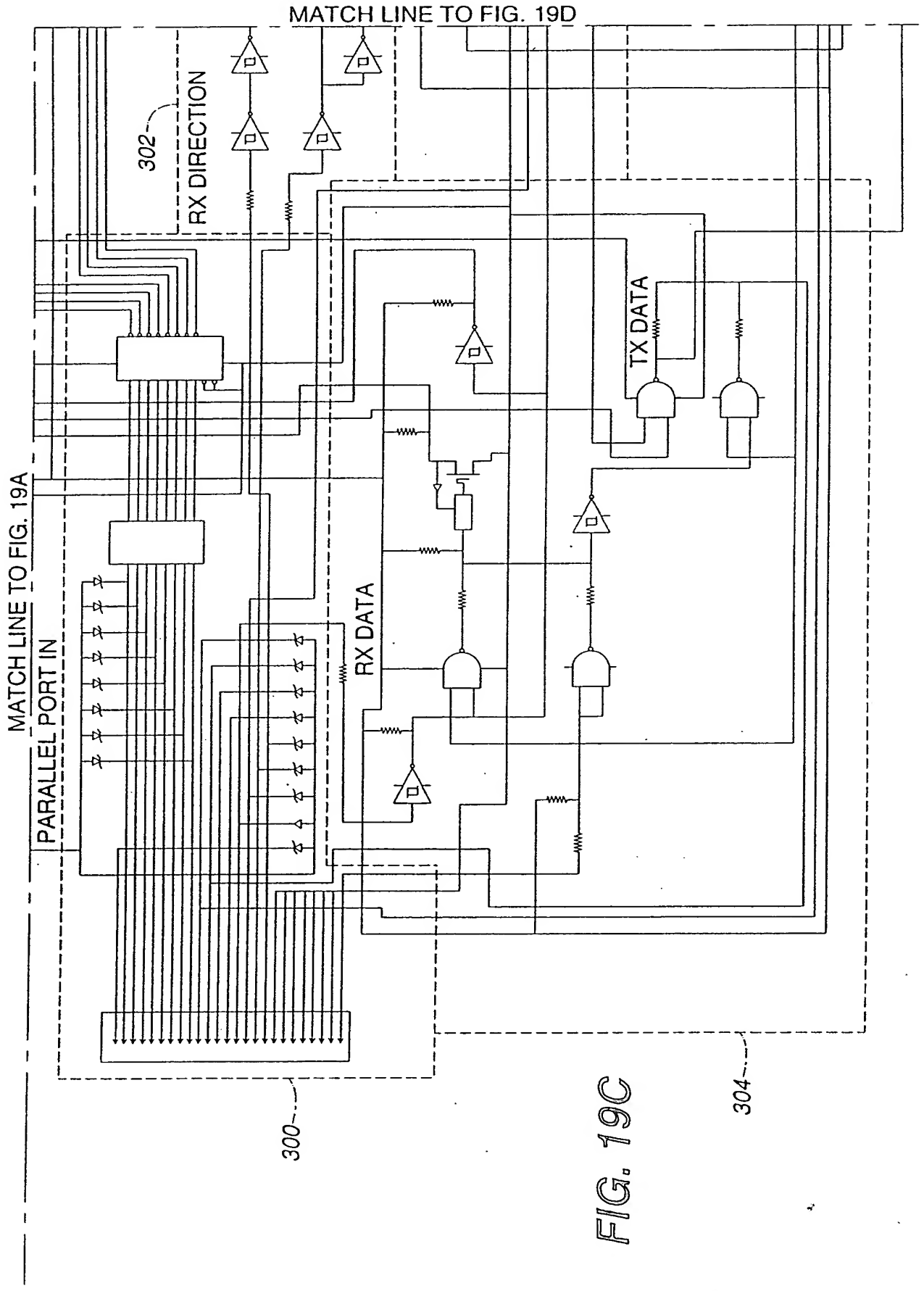

MATCH LINE TO FIG. 19D
302
RX DIRECTION
TX DATA
RX DATA
MATCH LINE TO FIG. 19A
PARALLEL PORT IN
300
304

FIG. 19C

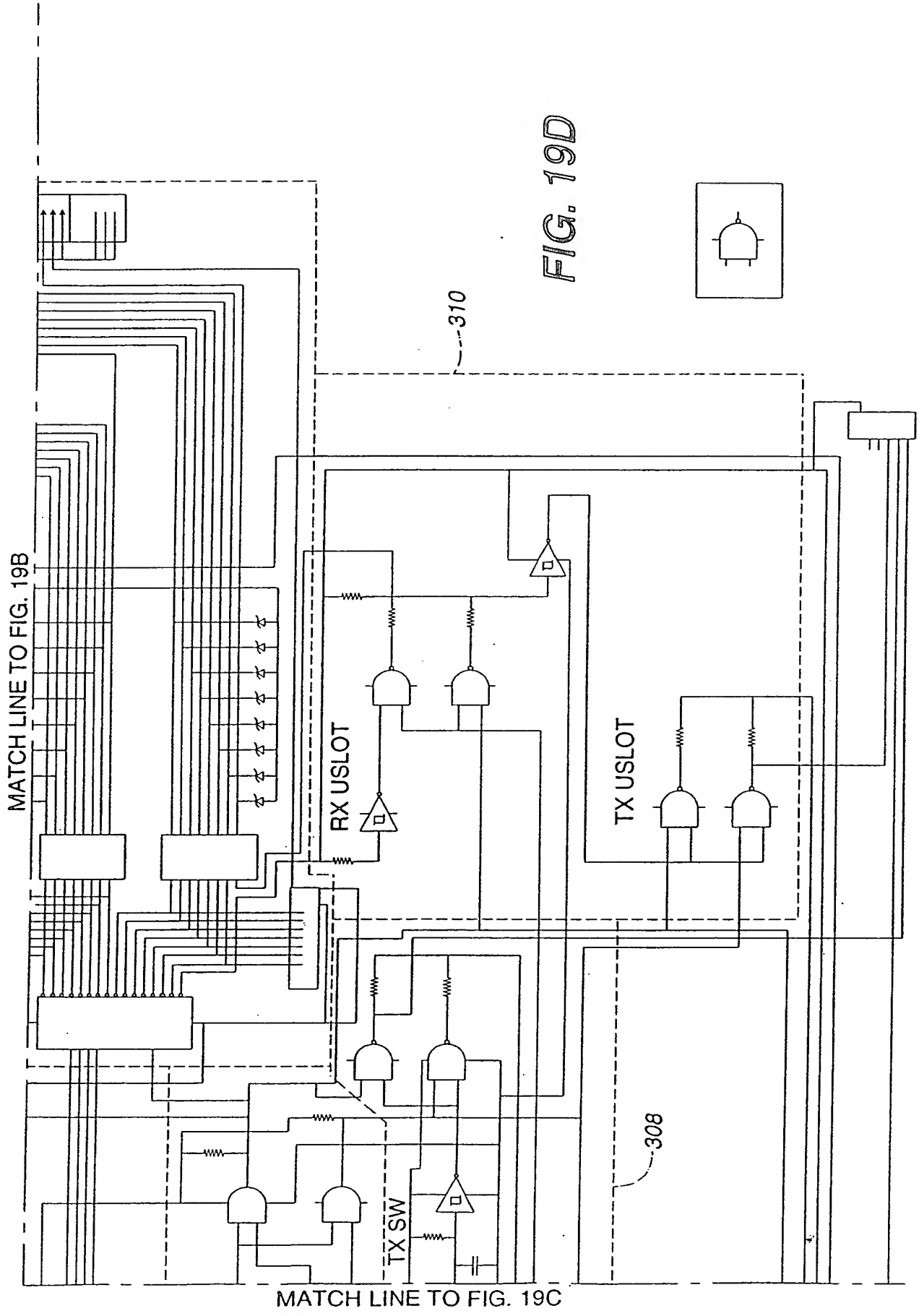

MATCH LINE TO FIG. 19B
310
RX USLOT
TX USLOT
308
TX SW
MATCH LINE TO FIG. 19C

FIG. 19D

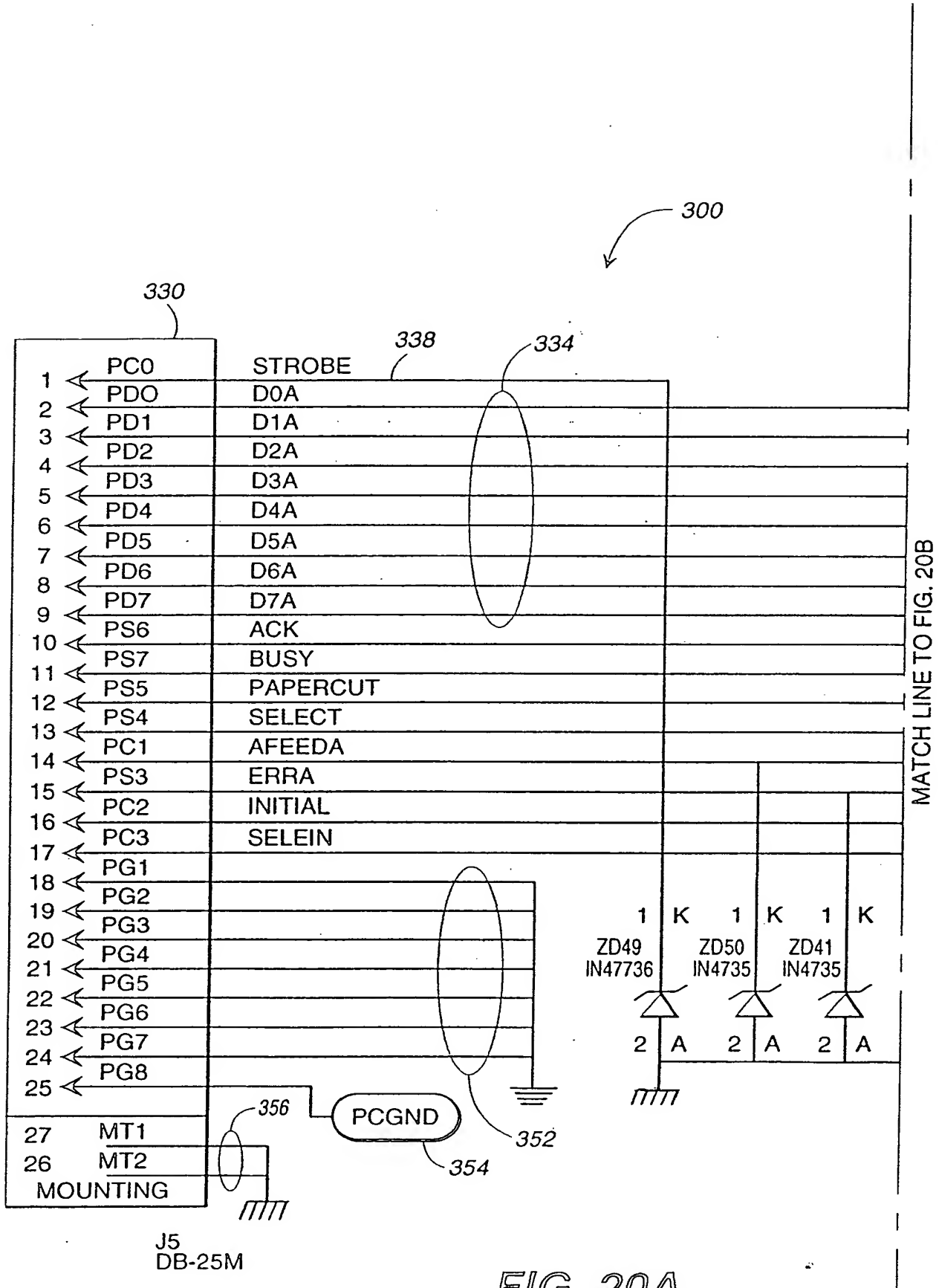

300
330
338
334
PC0
STROBE
1
PDO
D0A
2
PD1
D1A
3
PD2
D2A
4
PD3
D3A
5
PD4
D4A
6
PD5
D5A
7
PD6
D6A
8
PD7
D7A
9
PS6
ACK
10
PS7
BUSY
11
PS5
PAPERCUT
12
PS4
SELECT
13
PC1
AFEEDA
14
PS3
ERRA
15
PC2
INITIAL
16
PC3
SELEIN
17
PG1
18
PG2
19
PG3
20
PG4
21
PG5
22
PG6
23
PG7
24
PG8
25
27
MT1
26
MT2
MOUNTING
356
PCGND
352
354
J5
DB-25M
1
K
ZD49
IN47736
2
A
ZD50
IN4735
ZD41
IN4735
MATCH LINE TO FIG. 20B

FIG. 20A

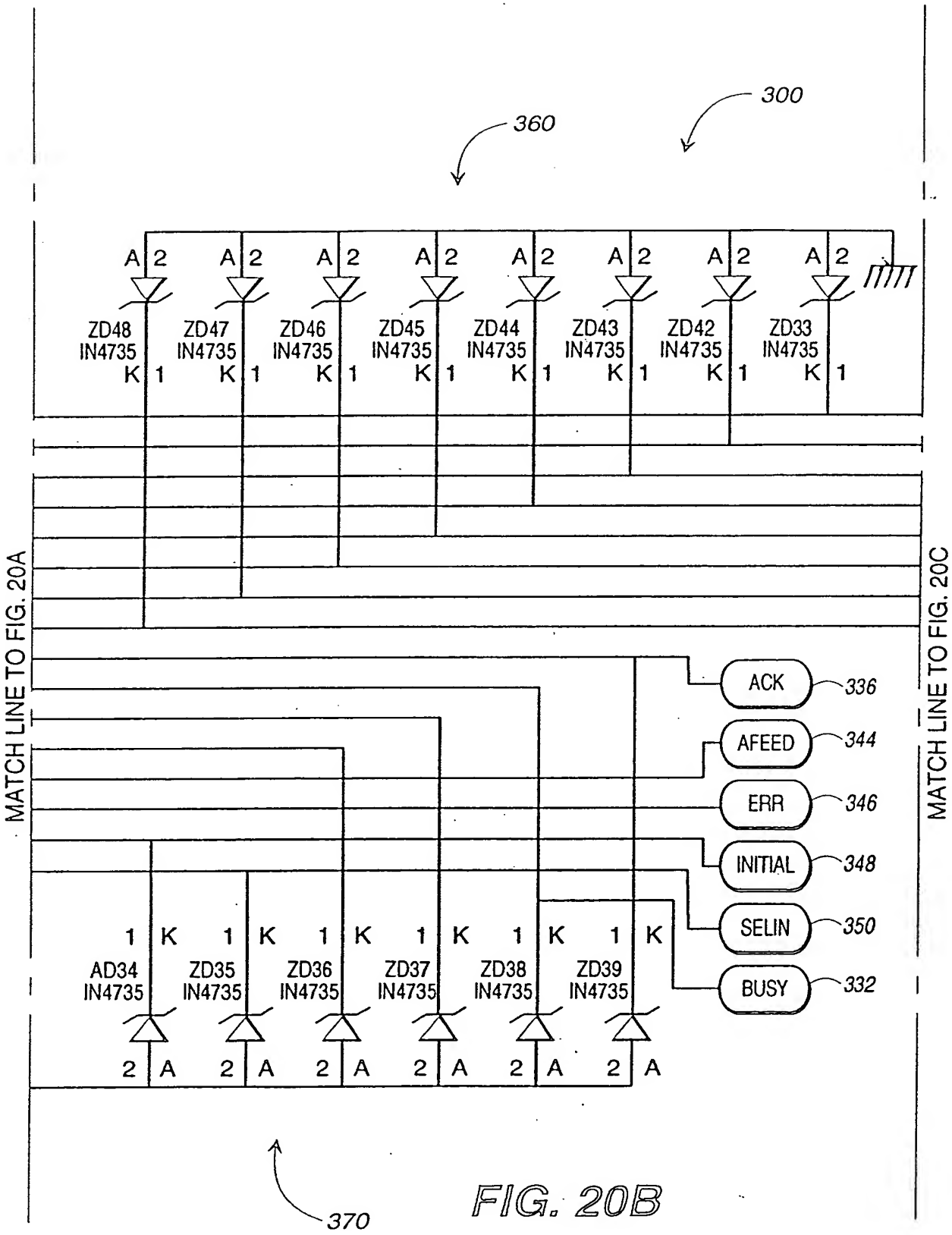

300
360
A 2
ZD48 IN4735 K 1
ZD47 IN4735
ZD46 IN4735
ZD45 IN4735
ZD44 IN4735
ZD43 IN4735
ZD42 IN4735
ZD33 IN4735
MATCH LINE TO FIG. 20A
MATCH LINE TO FIG. 20C
ACK
336
AFEED
344
ERR
346
INITIAL
348
SELIN
350
BUSY
332
1 K
AD34 IN4735
ZD35 IN4735
ZD36 IN4735
ZD37 IN4735
ZD38 IN4735
ZD39 IN4735
2 A
370

FIG. 20B

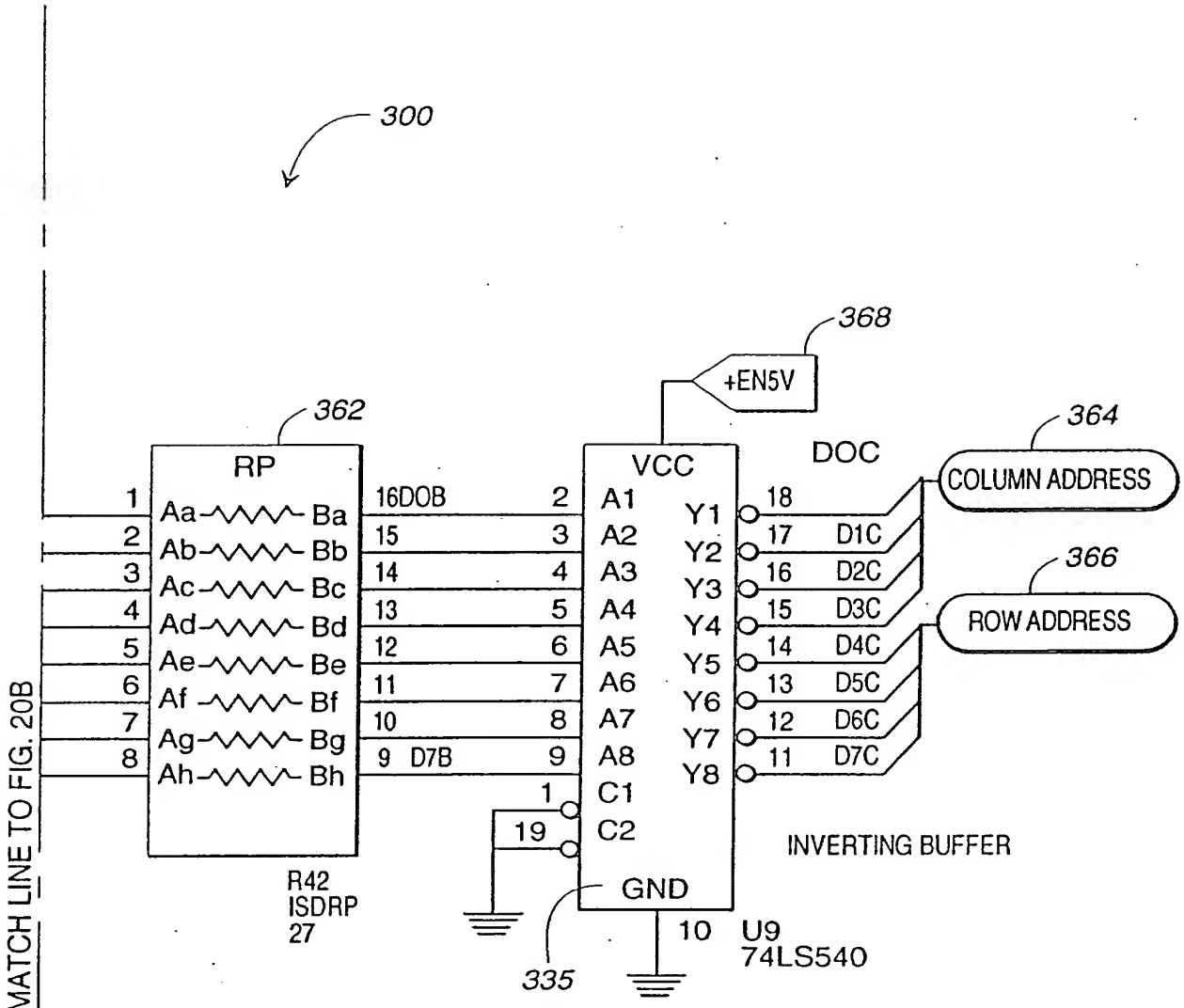

300
368
+EN5V
362
364
RP
VCC
DOC
COLUMN ADDRESS
366
ROW ADDRESS
MATCH LINE TO FIG. 20B
16DOB
D7B
D1C
D2C
D3C
D4C
D5C
D6C
D7C
INVERTING BUFFER
GND
R42
ISDRP
27
U9
74LS540
335

FIG. 20C

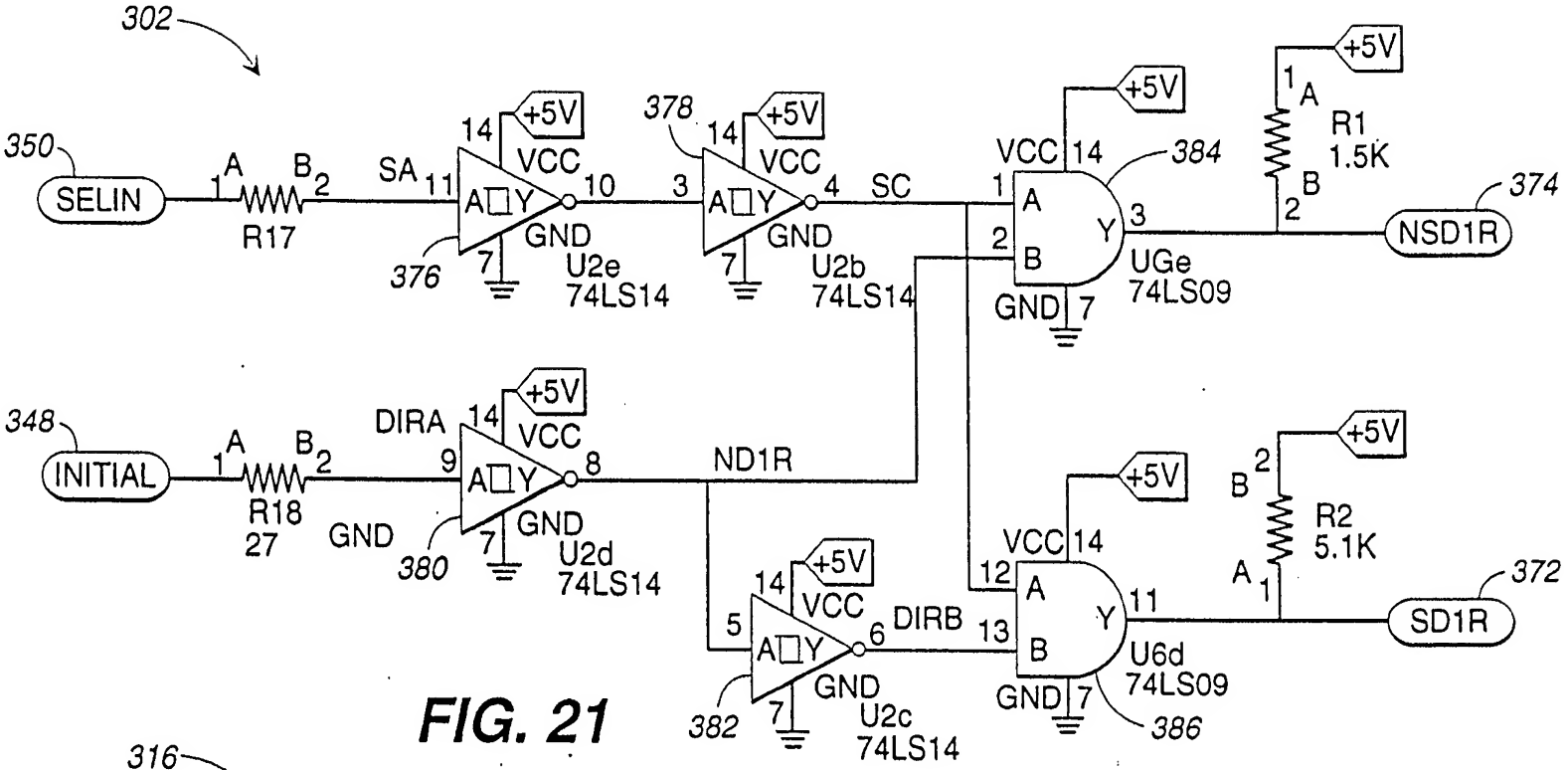

302
350
SELIN
R17
SA
376
U2e
74LS14
378
SC
U2b
74LS14
384
UGe
74LS09
R1
1.5K
374
NSD1R
348
INITIAL
R18
27
DIRA
380
U2d
74LS14
ND1R
382
U2c
74LS14
DIRB
U6d
74LS09
386
R2
5.1K
372
SD1R
+5V
VCC
GND

FIG. 21

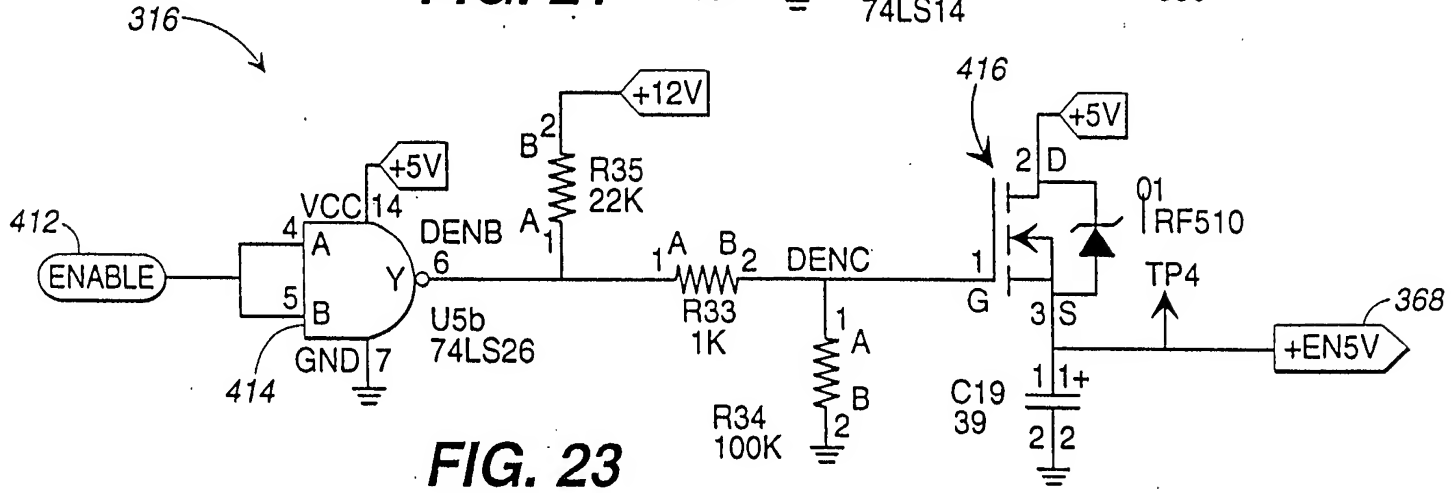

316
412
ENABLE
U5b
74LS26
414
DENB
R35
22K
+12V
R33
1K
DENC
R34
100K
416
RF510
Q1
TP4
368
+EN5V
C19
39
+5V
GND

FIG. 23

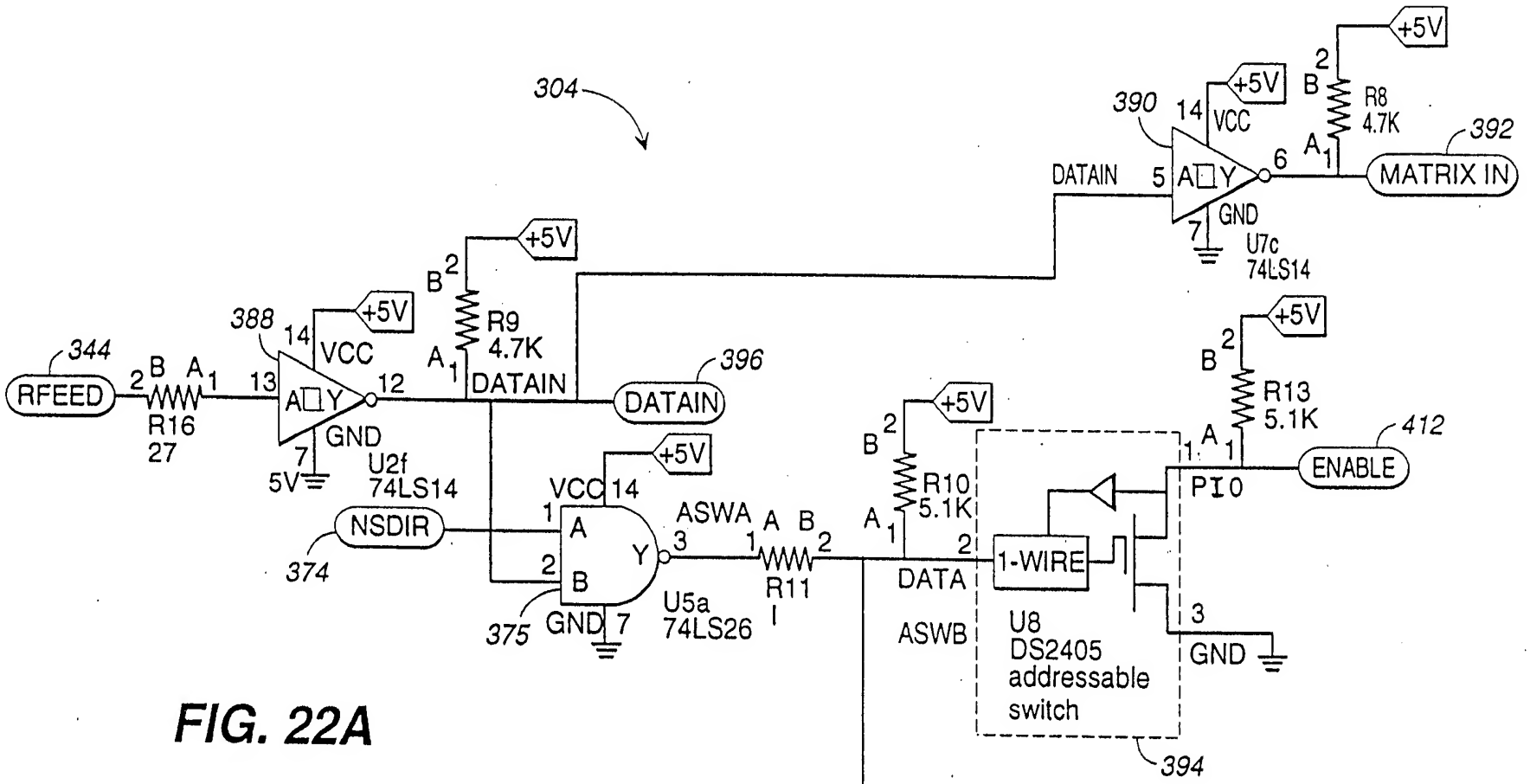


FIG. 22A

MATCH LINE TO FIG. 22B

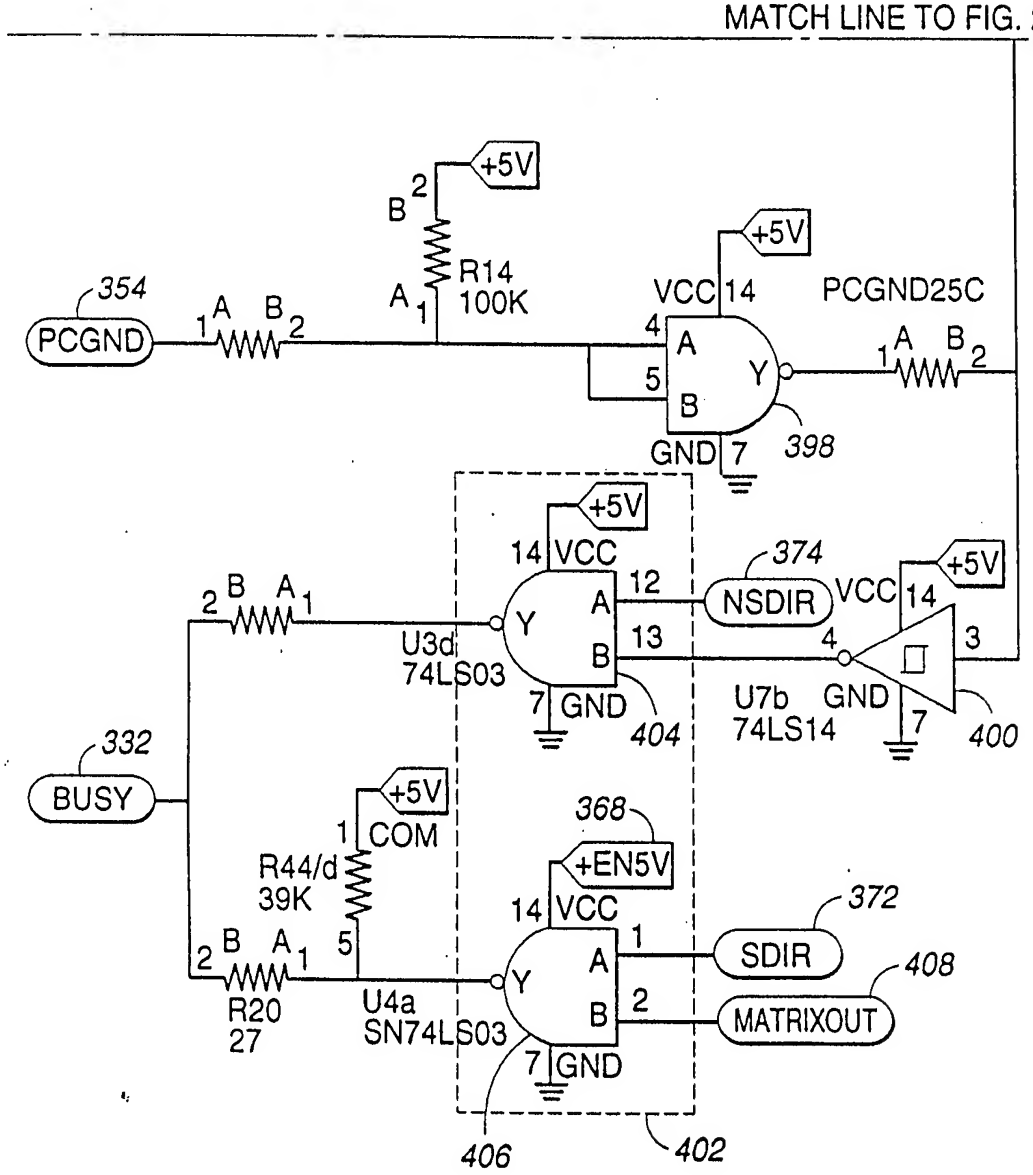

MATCH LINE TO FIG. 22A
304
+5V
B 2
R14
100K
A 1
354
PCGND
1 A B 2
VCC 14
+5V
PCGND25C
4 A
5 B
Y
1 A B 2
GND 7
398
+5V
14 VCC
374
NSDIR
VCC
+5V
2 B A 1
12 A
13 B
Y
U3d
74LS03
7 GND
404
4
U7b
74LS14
GND
7
14
3
400
332
BUSY
+5V
1 COM
368
+EN5V
R44/d
39K
14 VCC
372
2 B A 1
5
1 A
SDIR
408
2 B
MATRIXOUT
R20
27
U4a
SN74LS03
7 GND
406
402

FIG. 22B

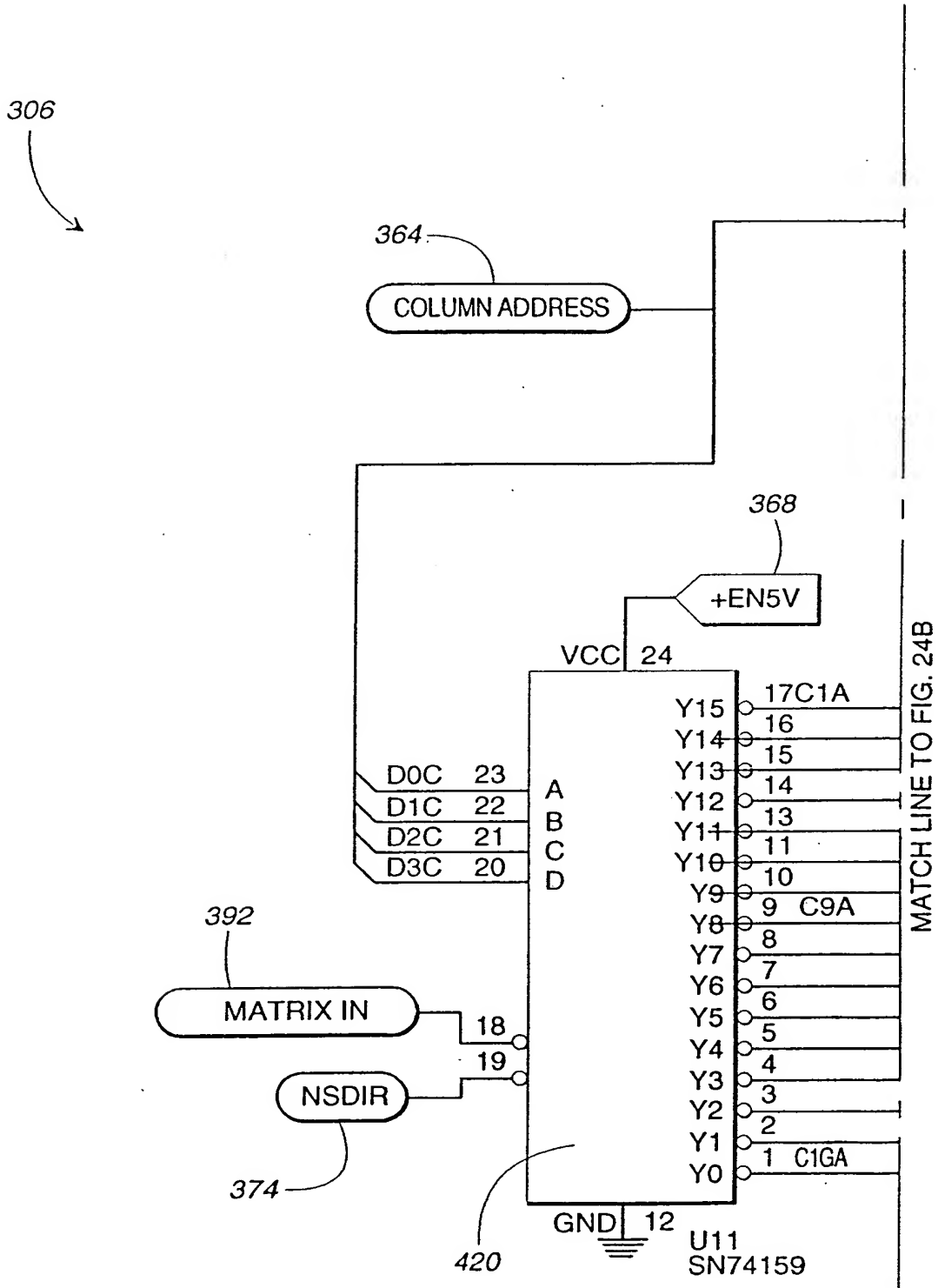

306
364
COLUMN ADDRESS
368
+EN5V
VCC 24
D0C 23
D1C 22
D2C 21
D3C 20
A
B
C
D
392
MATRIX IN
18
19
NSDIR
374
420
GND 12
U11
SN74159
Y15 17C1A
Y14 16
Y13 15
Y12 14
Y11 13
Y10 11
Y9 10
Y8 9 C9A
Y7 8
Y6 7
Y5 6
Y4 5
Y3 4
Y2 3
Y1 2
Y0 1 C1GA
MATCH LINE TO FIG. 24B

FIG. 24A

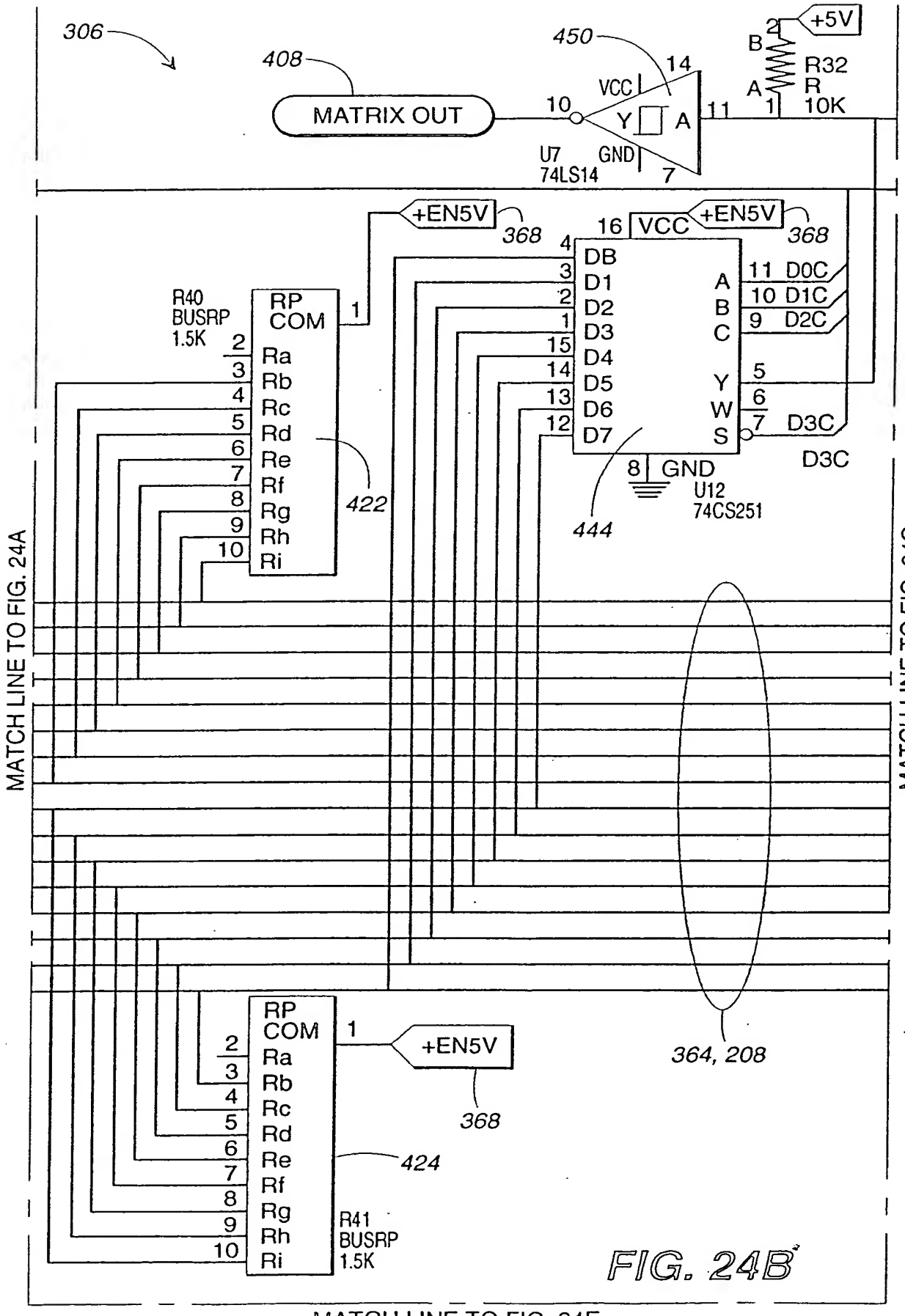

306
408
MATRIX OUT
450
U7
74LS14
VCC
GND
14
7
10
11
Y
A
+5V
B
A
R32
R
10K
+EN5V
368
16
VCC
DB
D1
D2
D3
D4
D5
D6
D7
GND
U12
74CS251
444
D0C
D1C
D2C
D3C
R40
BUSRP
1.5K
RP
COM
Ra
Rb
Rc
Rd
Re
Rf
Rg
Rh
Ri
422
R41
424
364, 208
MATCH LINE TO FIG. 24A
MATCH LINE TO FIG. 24C
MATCH LINE TO FIG. 24E

FIG. 24B

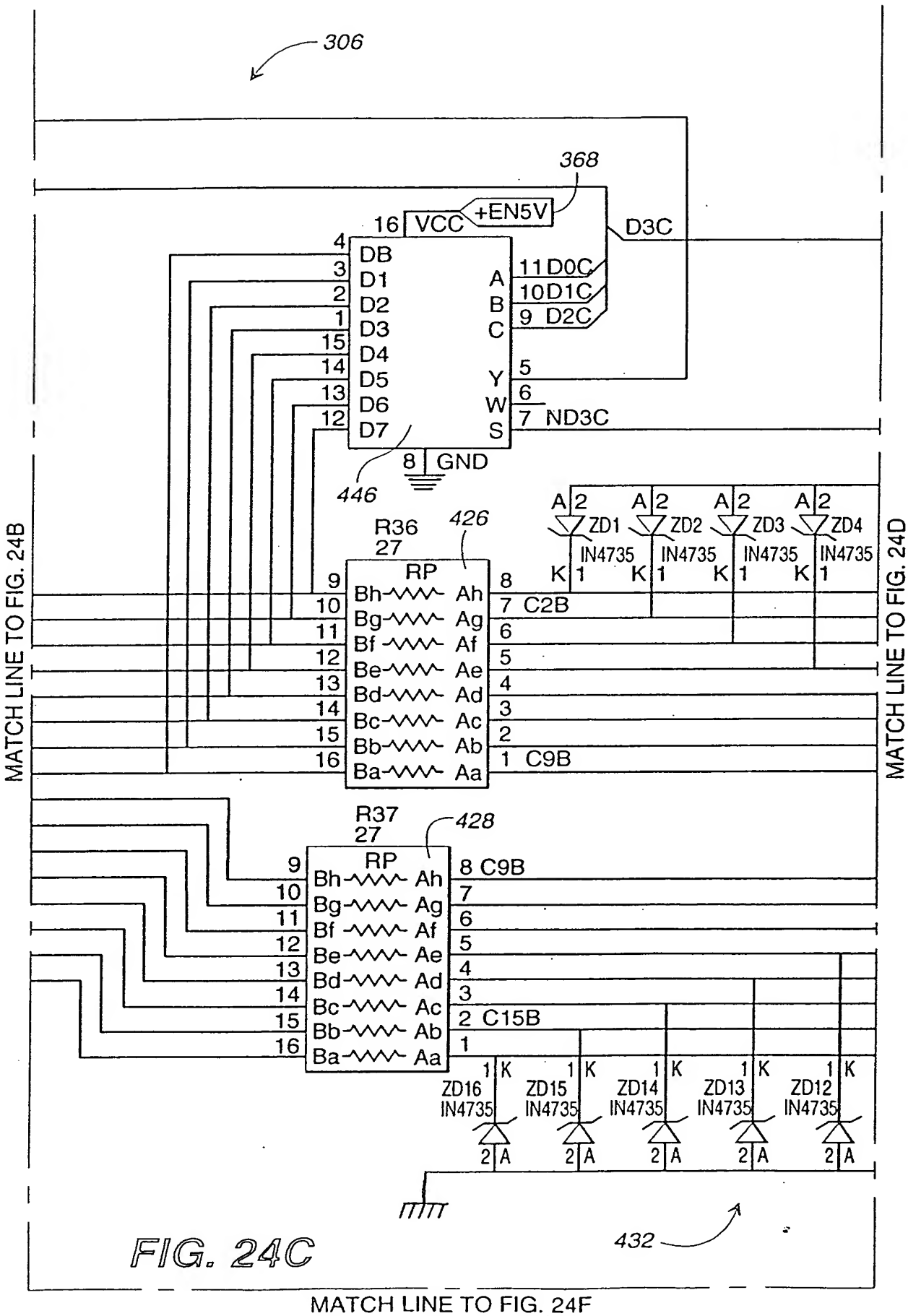

306
368
16 VCC
+EN5V
D3C
4 DB
3 D1
2 D2
1 D3
15 D4
14 D5
13 D6
12 D7
A 11 D0C
B 10 D1C
C 9 D2C
Y 5
W 6
S 7 ND3C
8 GND
446
MATCH LINE TO FIG. 24B
R36
27
426
RP
9 Bh Ah 8
10 Bg Ag 7 C2B
11 Bf Af 6
12 Be Ae 5
13 Bd Ad 4
14 Bc Ac 3
15 Bb Ab 2
16 Ba Aa 1 C9B
A 2 K 1 ZD1 IN4735
A 2 K 1 ZD2 IN4735
A 2 K 1 ZD3 IN4735
A 2 K 1 ZD4 IN4735
MATCH LINE TO FIG. 24D
R37
27
428
RP
9 Bh Ah 8 C9B
10 Bg Ag 7
11 Bf Af 6
12 Be Ae 5
13 Bd Ad 4
14 Bc Ac 3
15 Bb Ab 2 C15B
16 Ba Aa 1
1 K 2 A ZD16 IN4735
1 K 2 A ZD15 IN4735
1 K 2 A ZD14 IN4735
1 K 2 A ZD13 IN4735
1 K 2 A ZD12 IN4735
432
MATCH LINE TO FIG. 24F

FIG. 24C

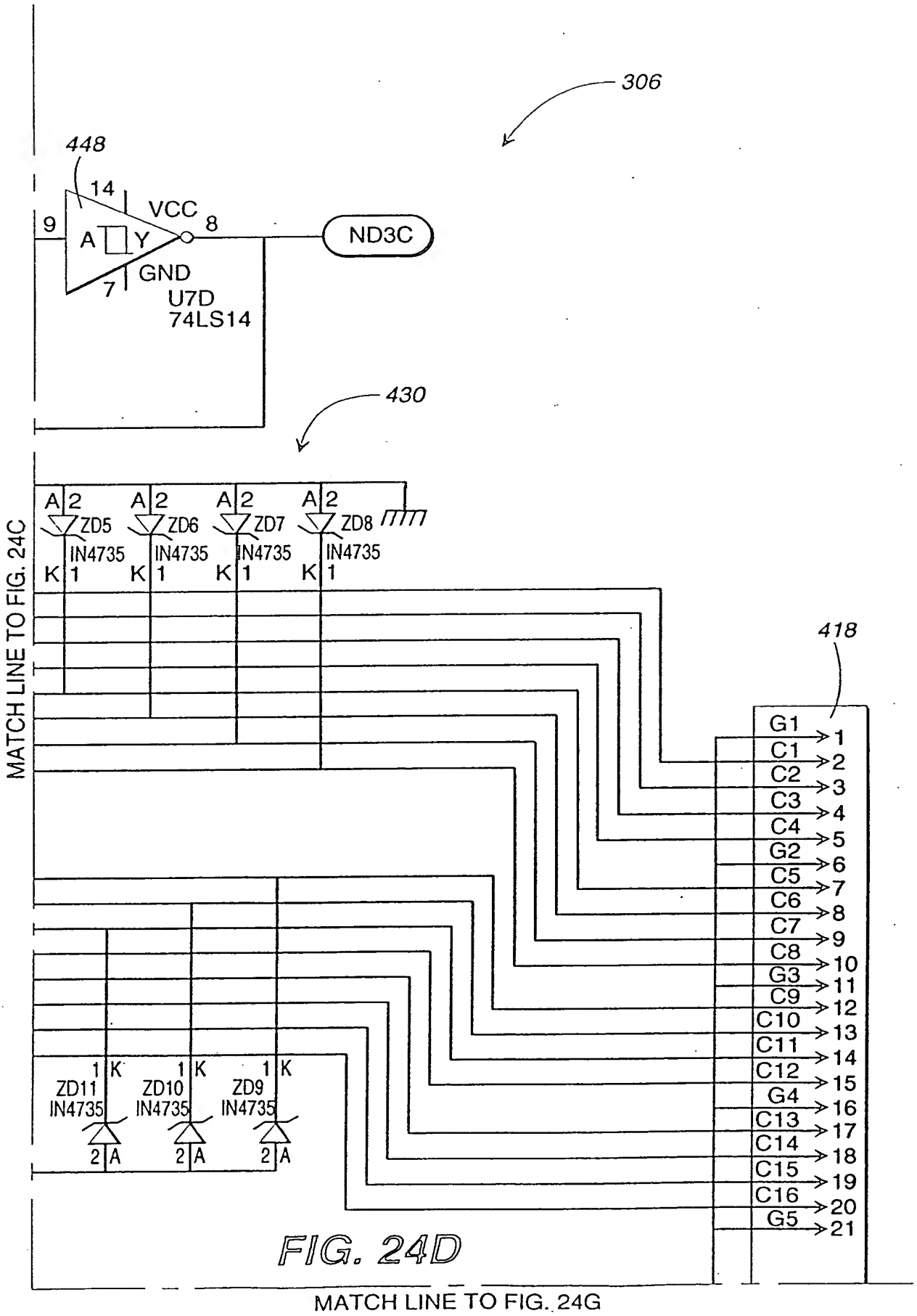

306
448
14
VCC
9
A
Y
8
ND3C
GND
7
U7D
74LS14
430
A 2
ZD5
IN4735
K 1
ZD6
ZD7
ZD8
MATCH LINE TO FIG. 24C
418
G1
C1
C2
C3
C4
G2
C5
C6
C7
C8
G3
C9
C10
C11
C12
G4
C13
C14
C15
C16
G5
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
1 K
ZD11
ZD10
ZD9
2 A
MATCH LINE TO FIG. 24G

FIG. 24D

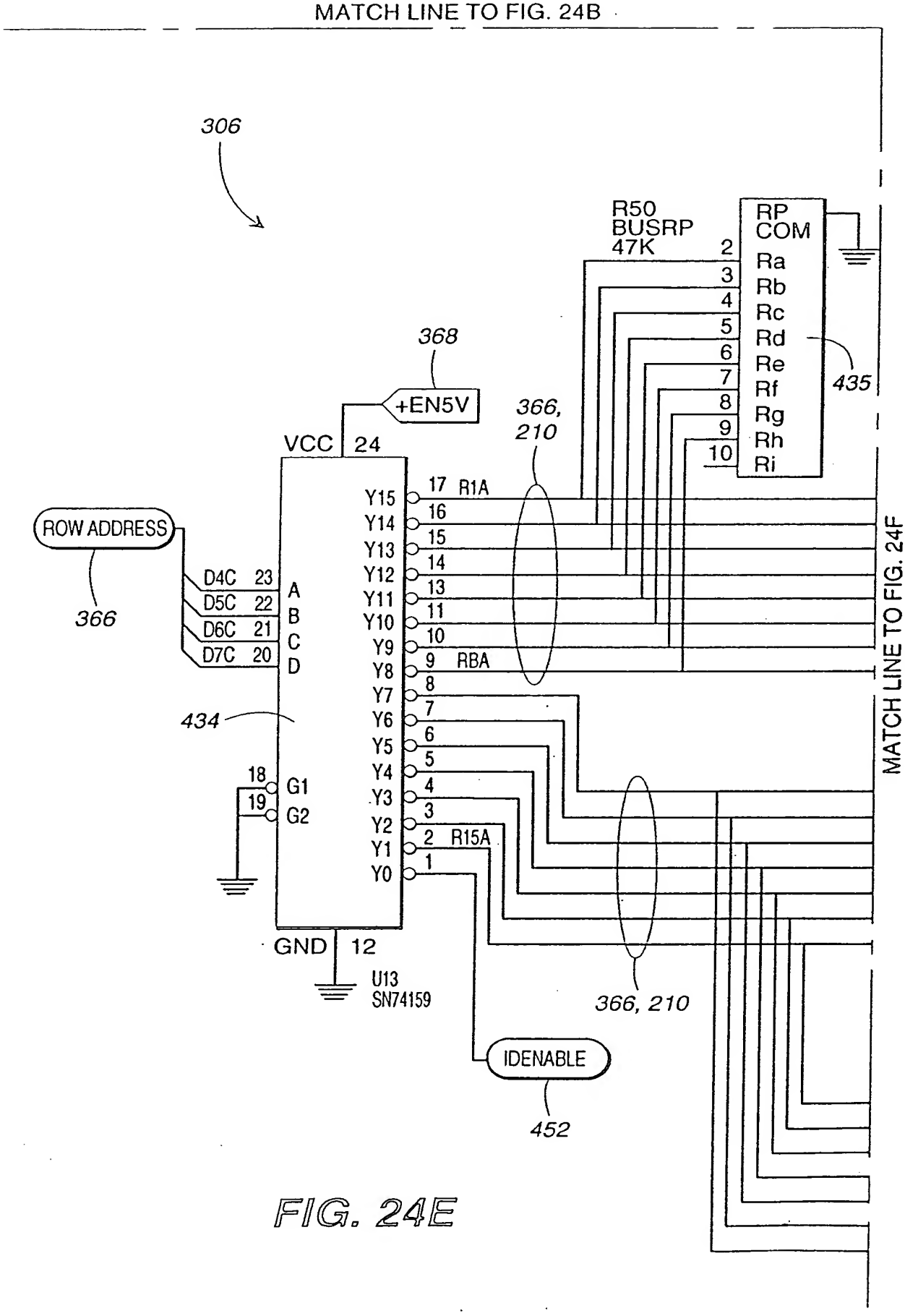

MATCH LINE TO FIG. 24B
306
R50
BUSRP
47K
RP
COM
2
Ra
3
Rb
4
Rc
5
Rd
6
Re
7
Rf
8
Rg
9
Rh
10
Ri
435
368
+EN5V
366,
210
VCC
24
17
R1A
16
15
14
13
11
10
9
RBA
8
7
6
5
4
3
2
R15A
1
Y15
Y14
Y13
Y12
Y11
Y10
Y9
Y8
Y7
Y6
Y5
Y4
Y3
Y2
Y1
Y0
ROW ADDRESS
366
D4C 23
D5C 22
D6C 21
D7C 20
A
B
C
D
434
18
19
G1
G2
GND
12
U13
SN74159
366, 210
IDENABLE
452
MATCH LINE TO FIG. 24F

FIG. 24E

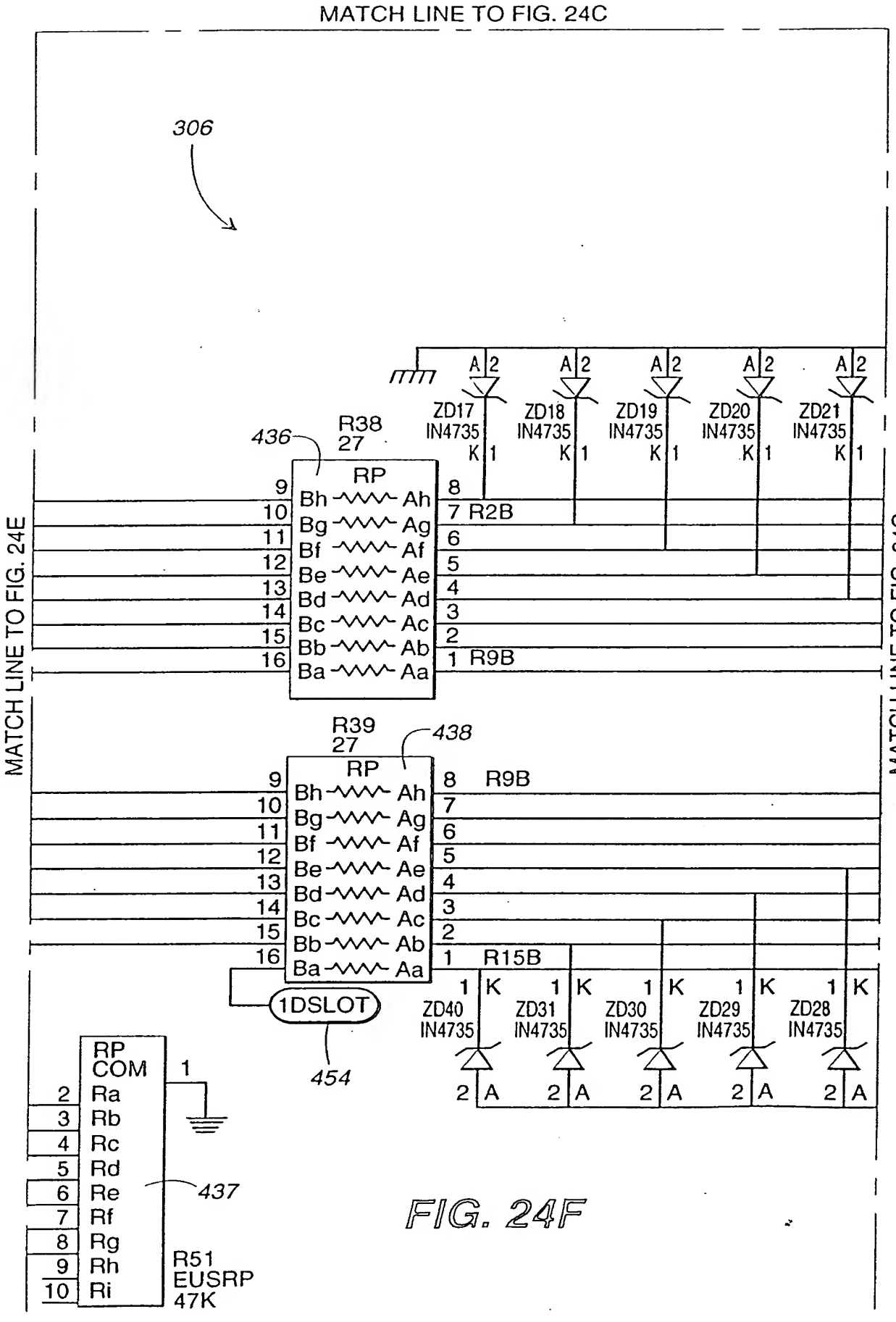

MATCH LINE TO FIG. 24C
306
ZD17 IN4735
ZD18 IN4735
ZD19 IN4735
ZD20 IN4735
ZD21 IN4735
436
R38
27
RP
R2B
R9B
MATCH LINE TO FIG. 24E
MATCH LINE TO FIG. 24G
R39
27
438
RP
R9B
R15B
1DSLOT
454
ZD40 IN4735
ZD31 IN4735
ZD30 IN4735
ZD29 IN4735
ZD28 IN4735
RP COM
Ra
Rb
Rc
Rd
Re
Rf
Rg
Rh
Ri
437
R51
EUSRP
47K

FIG. 24F

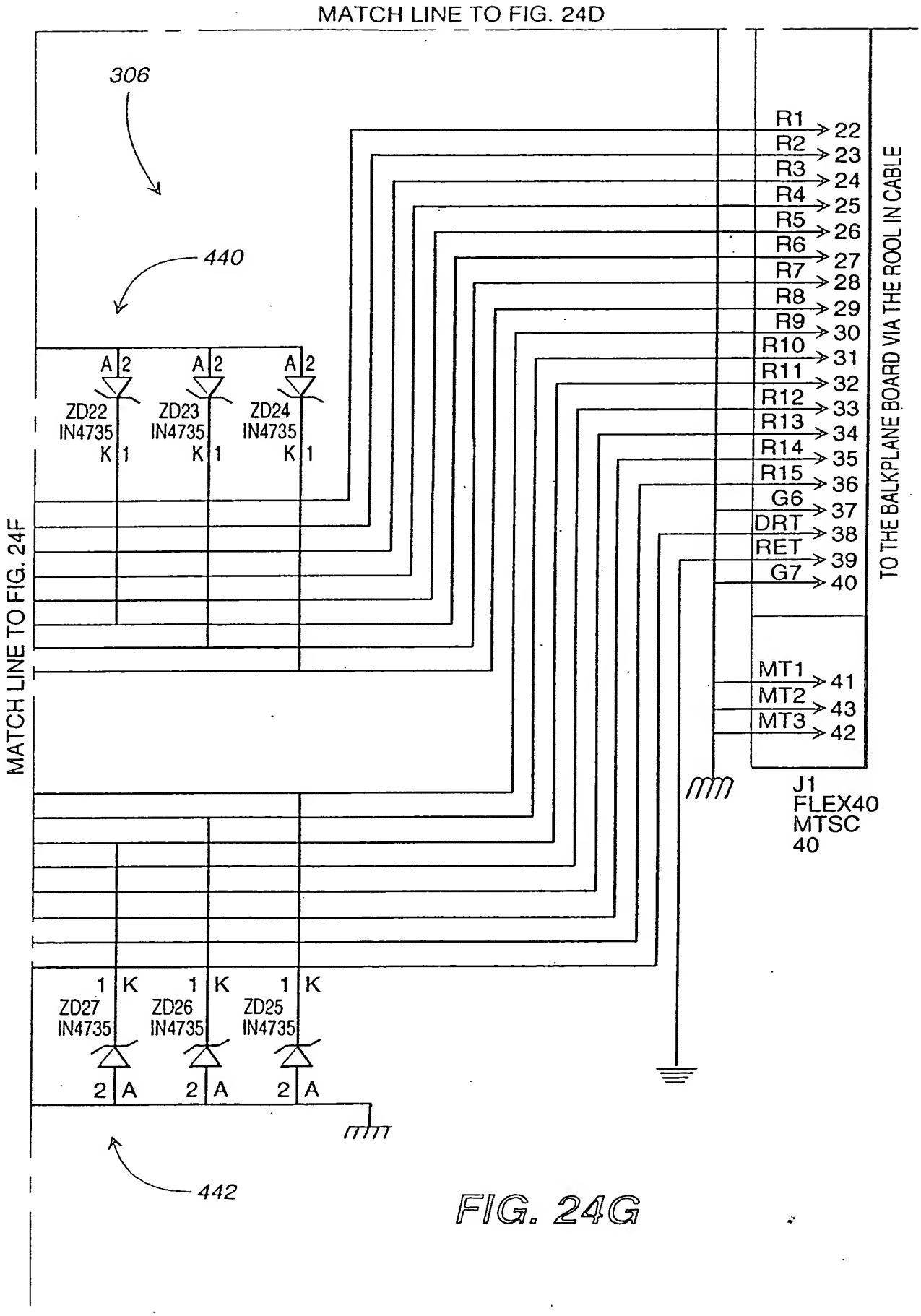

MATCH LINE TO FIG. 24D
306
440
A 2
ZD22
IN4735
K 1
A 2
ZD23
IN4735
K 1
A 2
ZD24
IN4735
K 1
R1 → 22
R2 → 23
R3 → 24
R4 → 25
R5 → 26
R6 → 27
R7 → 28
R8 → 29
R9 → 30
R10 → 31
R11 → 32
R12 → 33
R13 → 34
R14 → 35
R15 → 36
G6 → 37
DRT → 38
RET → 39
G7 → 40
MT1 → 41
MT2 → 43
MT3 → 42
J1
FLEX40
MTSC
40
TO THE BALKPLANE BOARD VIA THE ROOL IN CABLE
MATCH LINE TO FIG. 24F
1 K
ZD27
IN4735
2 A
1 K
ZD26
IN4735
2 A
1 K
ZD25
IN4735
2 A
442

FIG. 24G

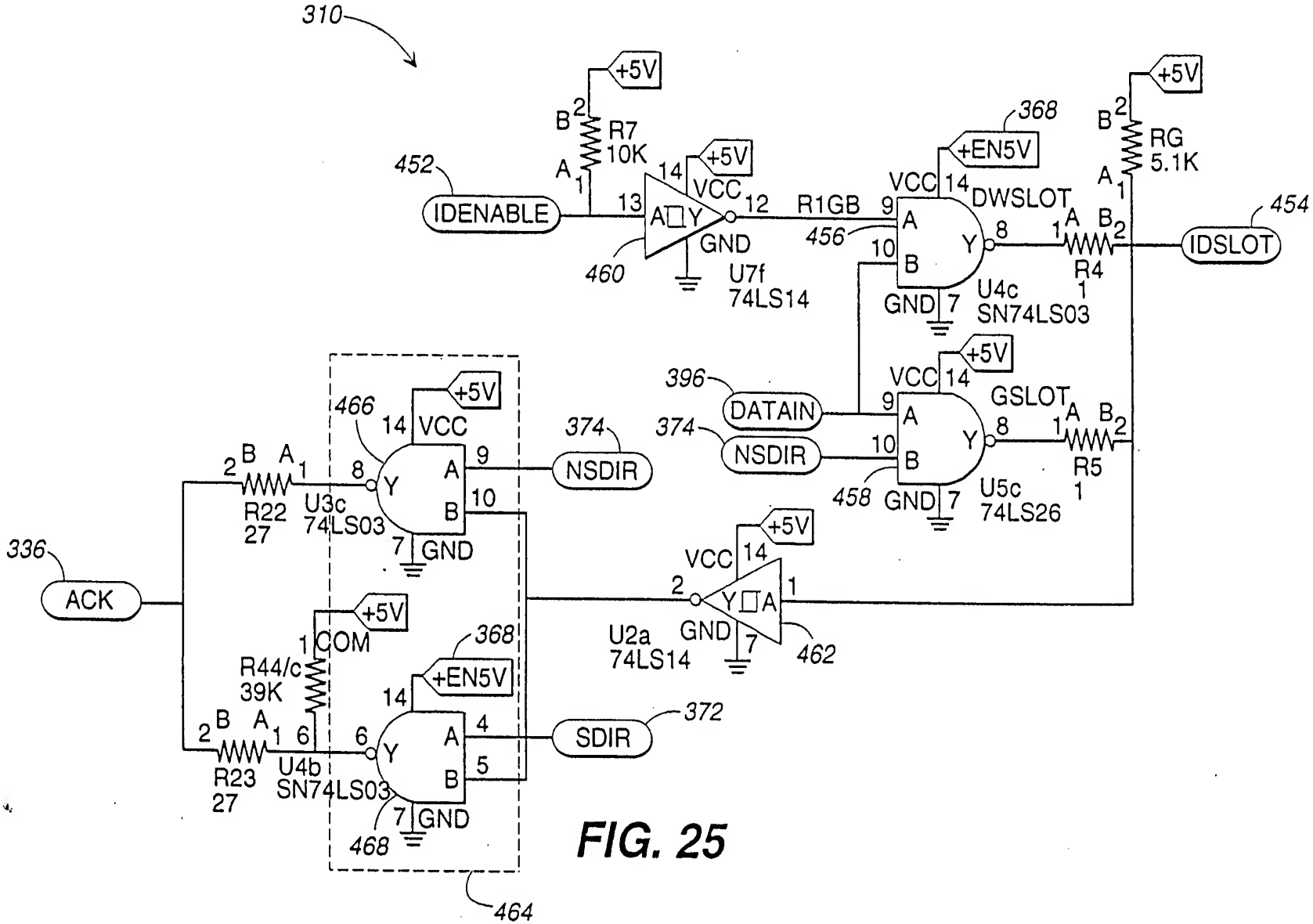

310
+5V
B 2
R7
10K
A 1
452
IDENABLE
14 VCC
13
A
Y
12
GND
460
U7f
74LS14
R1GB
368
+EN5V
VCC 14
DWSLOT
9 A
456
10 B
Y 8
GND 7
U4c
SN74LS03
+5V
B 2
RG
5.1K
A 1
A B 2
1
R4
1
454
IDSLOT
+5V
VCC 14
396
DATAIN
9 A
374
NSDIR
10 B
Y 8
458
GND 7
U5c
74LS26
GSLOT
A B 2
1
R5
1
+5V
466
14 VCC
2 B A 1
8
Y
A 9
B 10
7 GND
R22
27
U3c
74LS03
374
NSDIR
336
ACK
+5V
VCC 14
2
Y
A 1
GND 7
U2a
74LS14
462
+5V
1 COM
R44/c
39K
368
+EN5V
14
2 B A 1 6
6
Y
A 4
B 5
7 GND
R23
27
U4b
SN74LS03
372
SDIR
468
464

FIG. 25

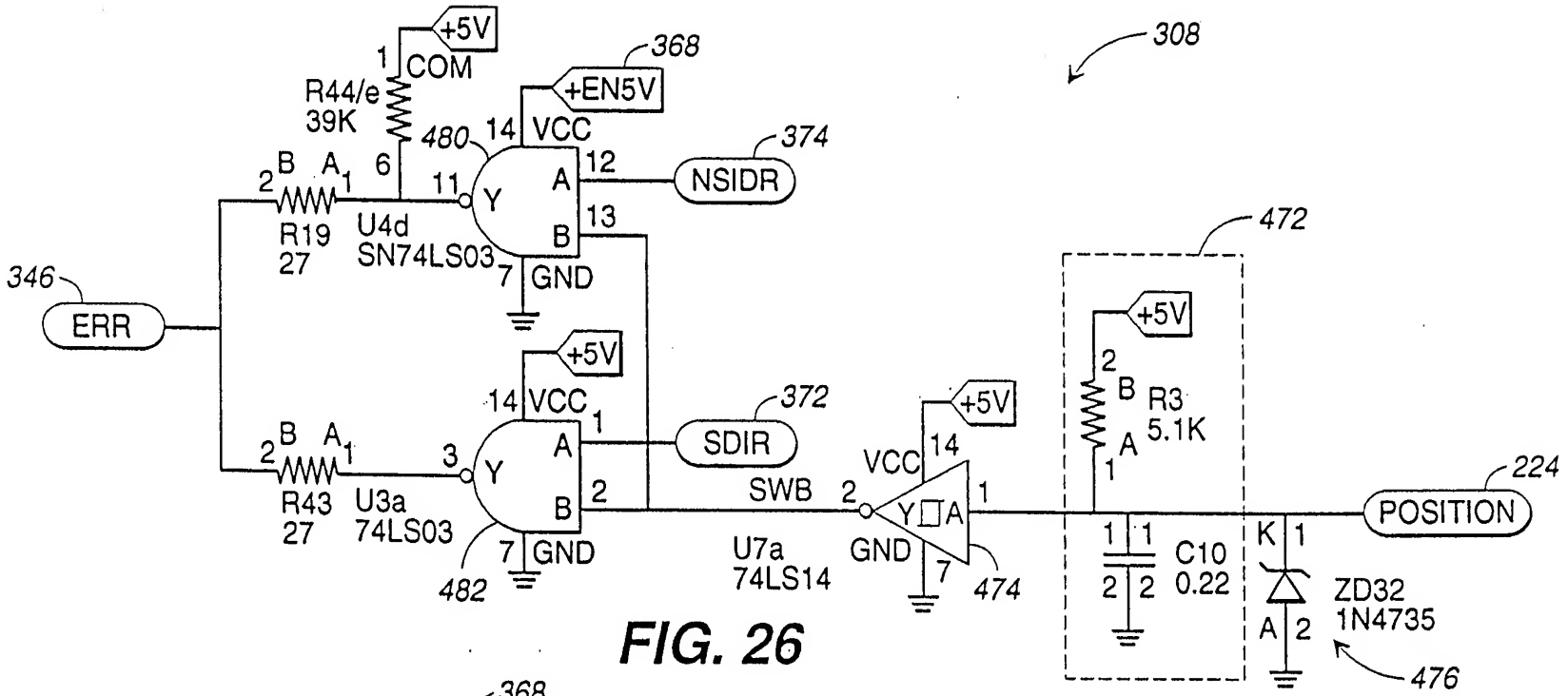

308
+5V
COM
R44/e
39K
368
+EN5V
480
VCC
14
374
NSIDR
B A
2 1
6
11
Y
A
12
13
B
R19
27
U4d
SN74LS03
7 GND
346
ERR
+5V
14 VCC
372
SDIR
B A
2 1
3
Y
A
1
B
2
R43
27
U3a
74LS03
7 GND
482
SWB
U7a
74LS14
+5V
VCC
14
2
Y
A
1
GND
7
474
472
+5V
2
B
R3
5.1K
A
1
224
POSITION
1 1
2 2
C10
0.22
K 1
ZD32
1N4735
A 2
476

FIG. 26

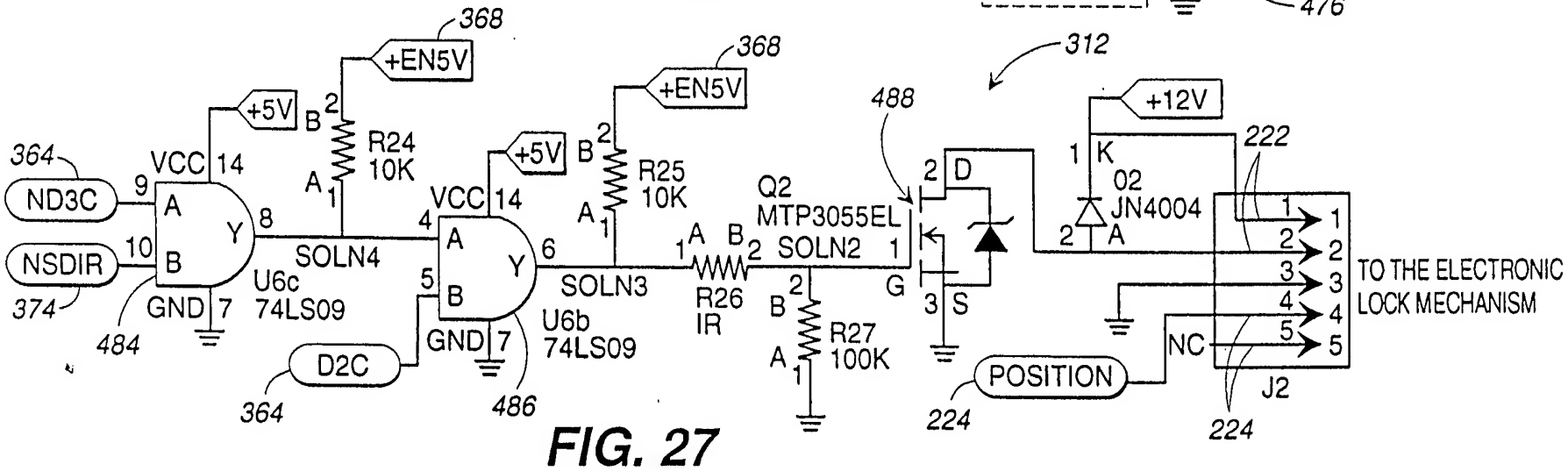

368
+EN5V
B 2
R24
10K
A 1
+5V
364
ND3C
VCC
14
9
A
Y
8
NSDIR
10
B
SOLN4
374
GND 7
U6c
74LS09
484
368
+EN5V
B 2
R25
10K
A 1
+5V
VCC
14
4
A
Y
6
5
B
SOLN3
GND 7
U6b
74LS09
D2C
364
486
312
488
Q2
MTP3055EL
2 D
1 A B 2
SOLN2
1
G
3 S
R26
IR
B 2
R27
100K
A 1
+12V
222
1 K
02
JN4004
2 A
1
2
3
4
5
TO THE ELECTRONIC
LOCK MECHANISM
NC
POSITION
224
J2
224

FIG. 27

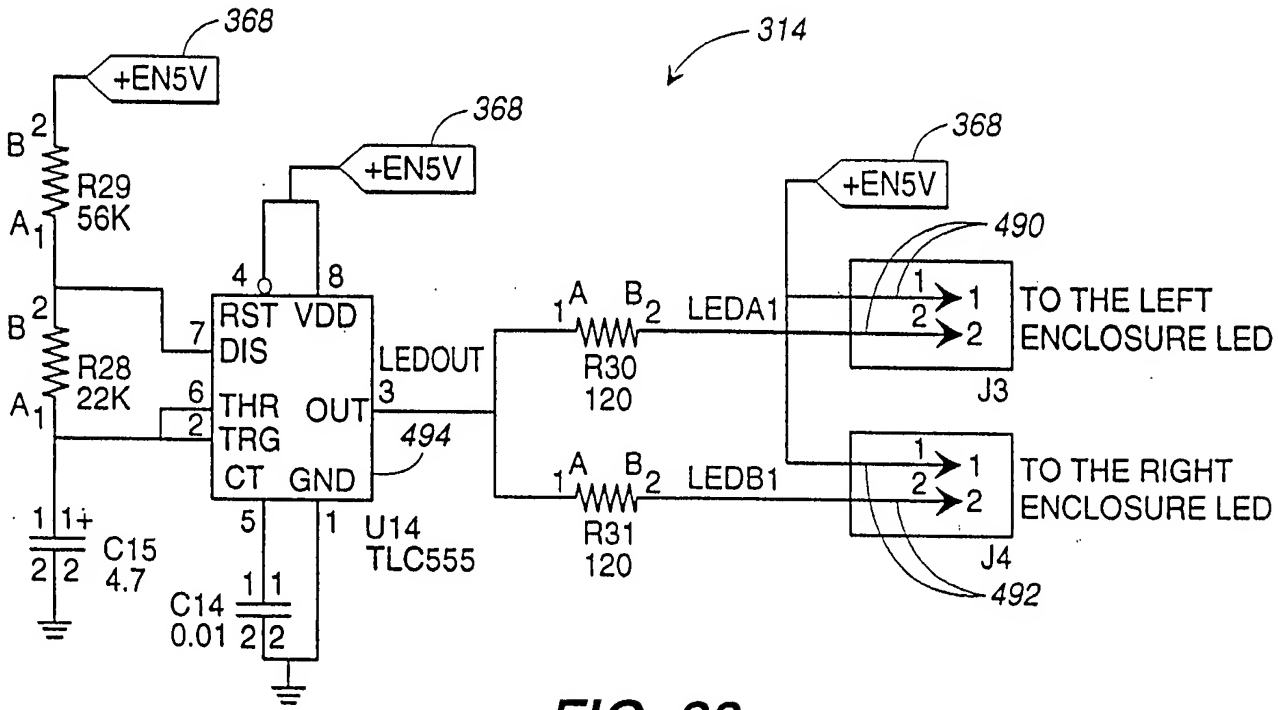

368
+EN5V
314
368
+EN5V
368
+EN5V
490
B 2
R29
56K
A 1
4
8
RST VDD
7
DIS
LEDOUT
3
B 2
R28
22K
6
2
THR OUT
TRG
494
CT GND
A B 2
LEDA1
R30
120
TO THE LEFT
ENCLOSURE LED
J3
A B 2
LEDB1
R31
120
TO THE RIGHT
ENCLOSURE LED
J4
492
1 1+
2 2
C15
4.7
5
1
U14
TLC555
C14
0.01

FIG. 28

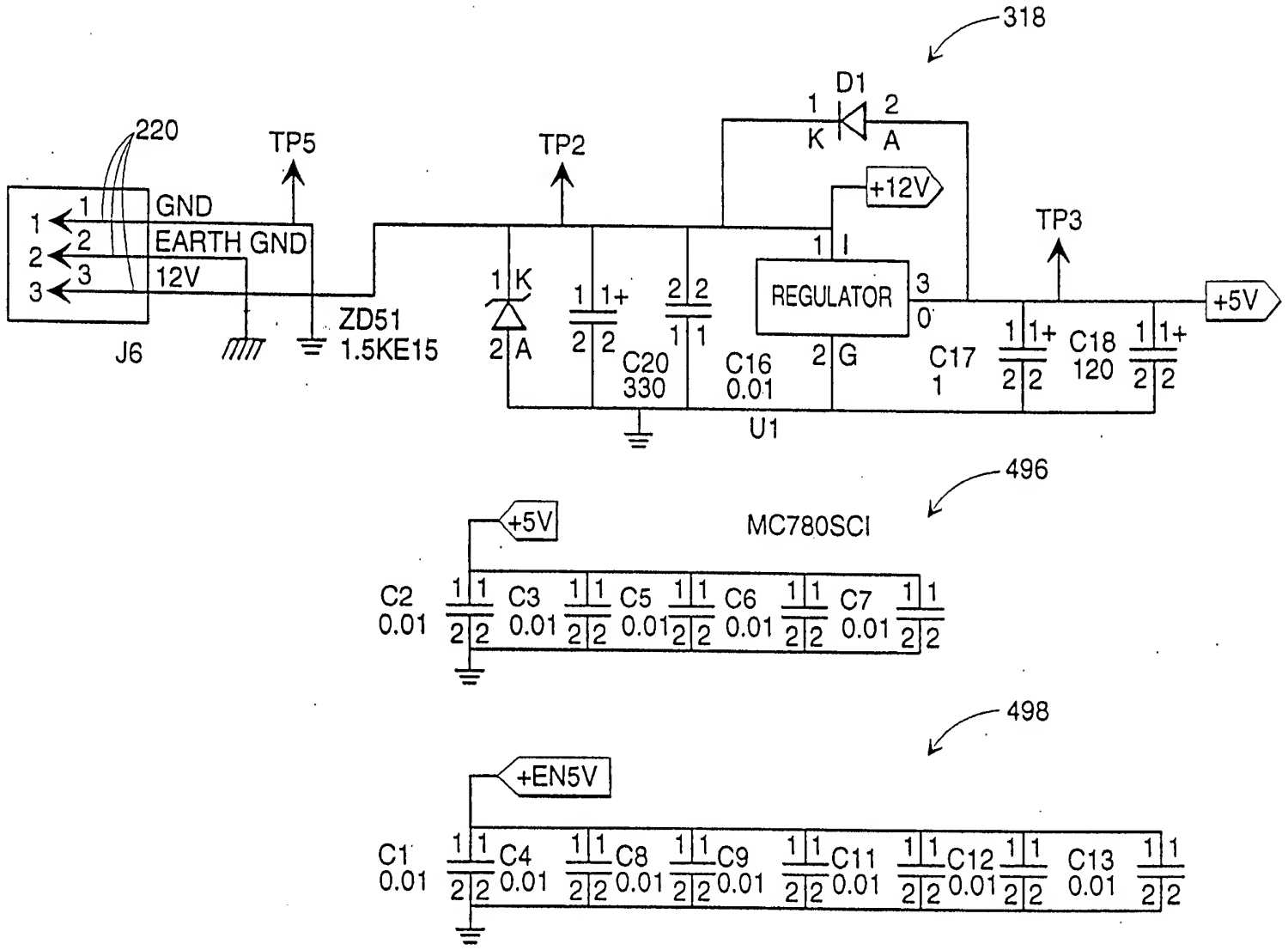

318
D1
1
2
K
A
220
TP5
TP2
+12V
TP3
1
GND
2
EARTH GND
3
12V
J6
ZD51
1.5KE15
1
K
2
A
1
1+
2
2
C20
330
2
2
1
1
C16
0.01
1
I
REGULATOR
3
0
2
G
+5V
C17
1
1
1+
2
2
C18
120
1
1+
2
2
U1
496
MC780SCI
+5V
C2
0.01
C3
0.01
C5
0.01
C6
0.01
C7
0.01
498
+EN5V
C1
0.01
C4
0.01
C8
0.01
C9
0.01
C11
0.01
C12
0.01
C13
0.01

FIG. 29

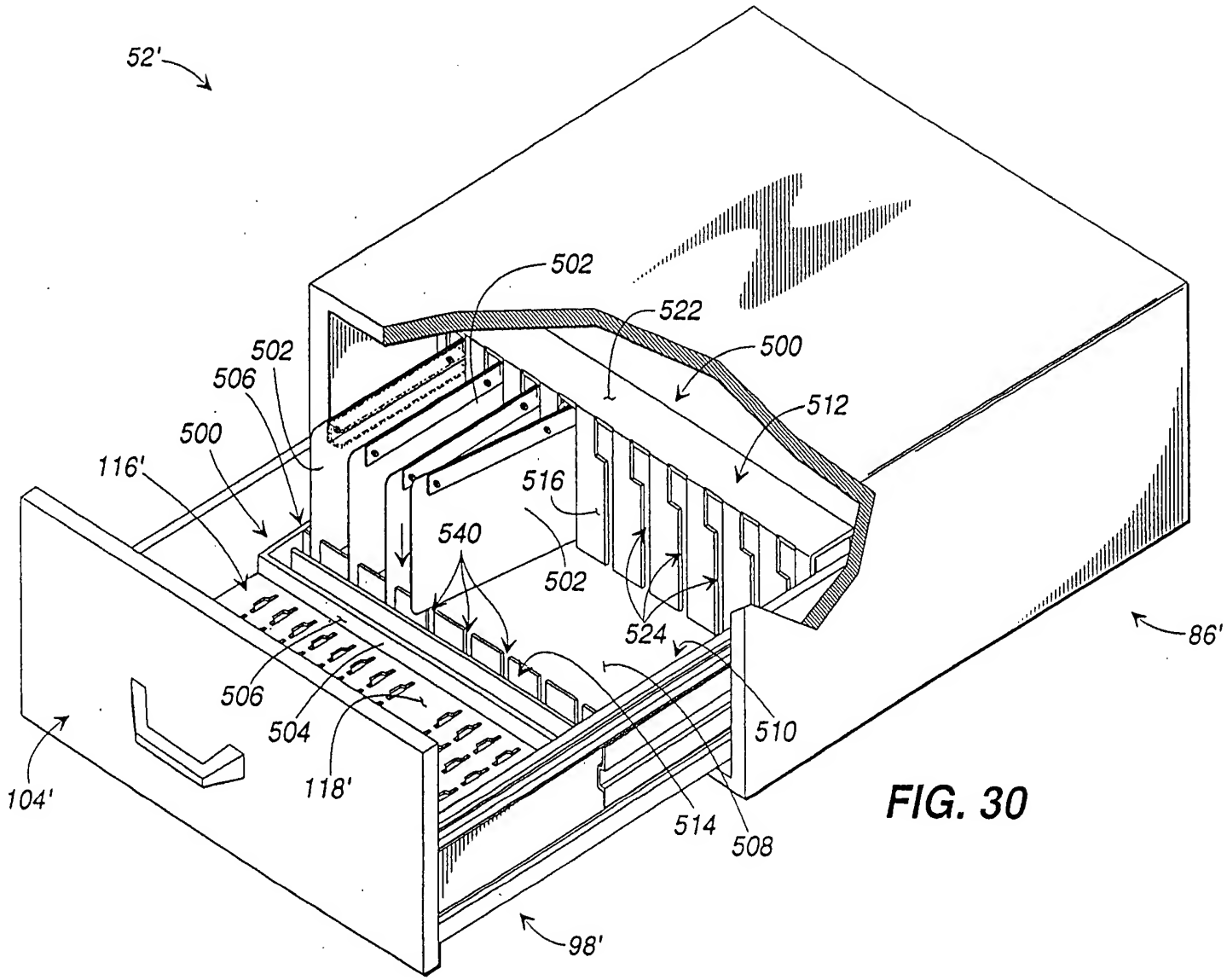

52'
502
522
500
512
502
506
500
116'
516
540
502
524
86'
506
504
118'
104'
510
514
508
98'

FIG. 30

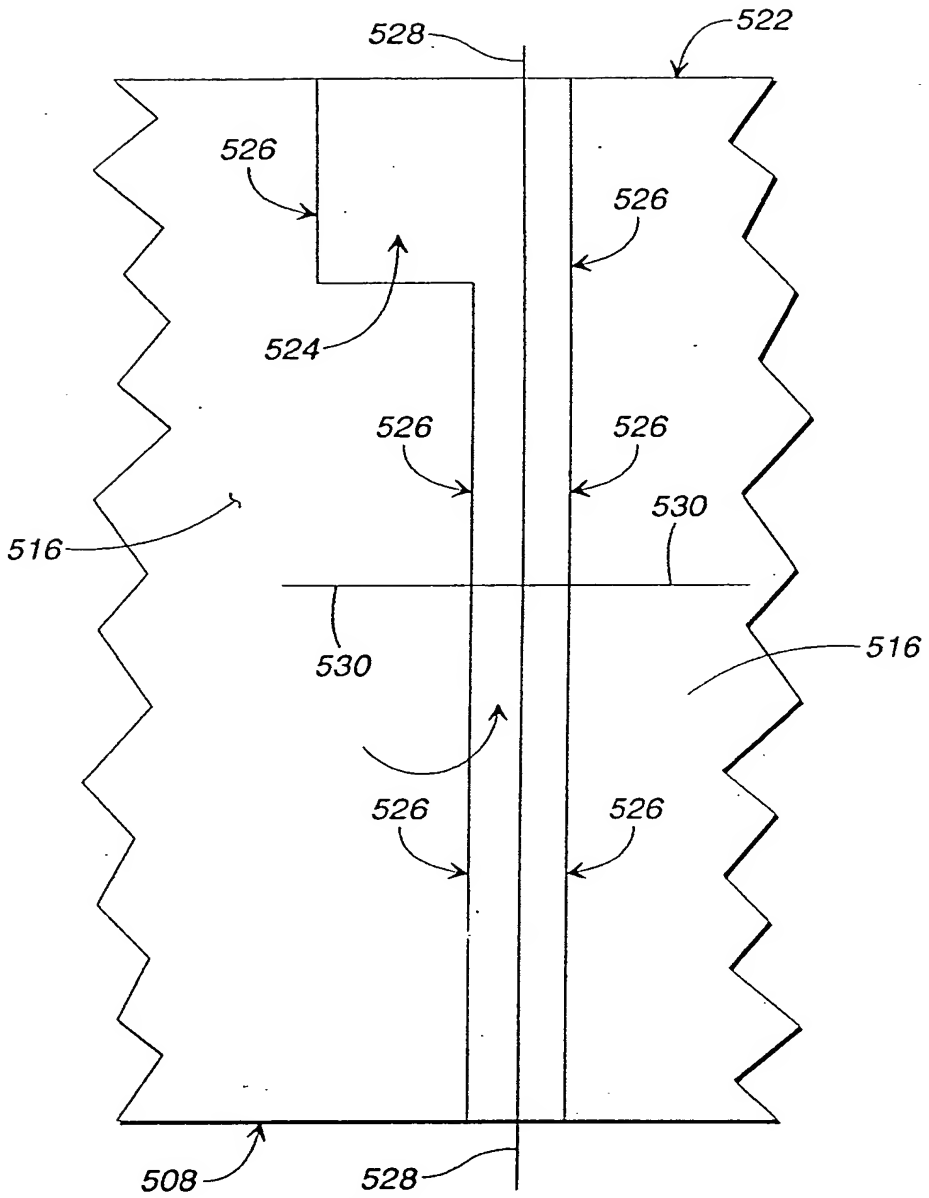

528
522
526
526
524
526
526
530
516
530
516
526
526
508
528

FIG. 31

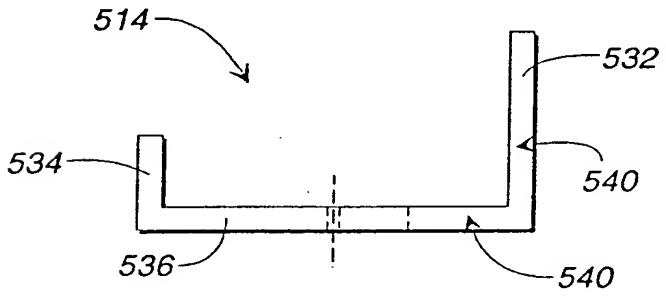

514
532
534
540
536
540

FIG. 32

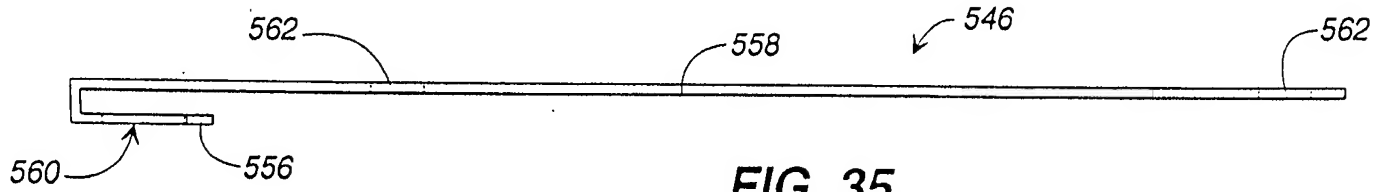


FIG. 35

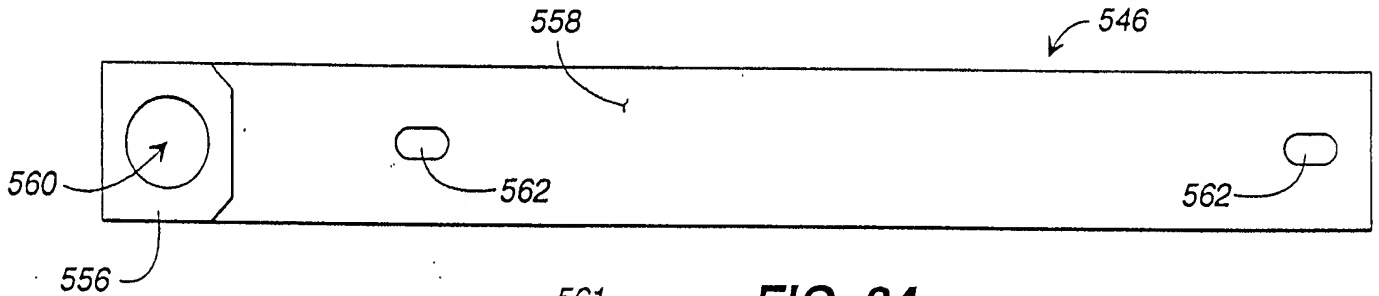


FIG. 34

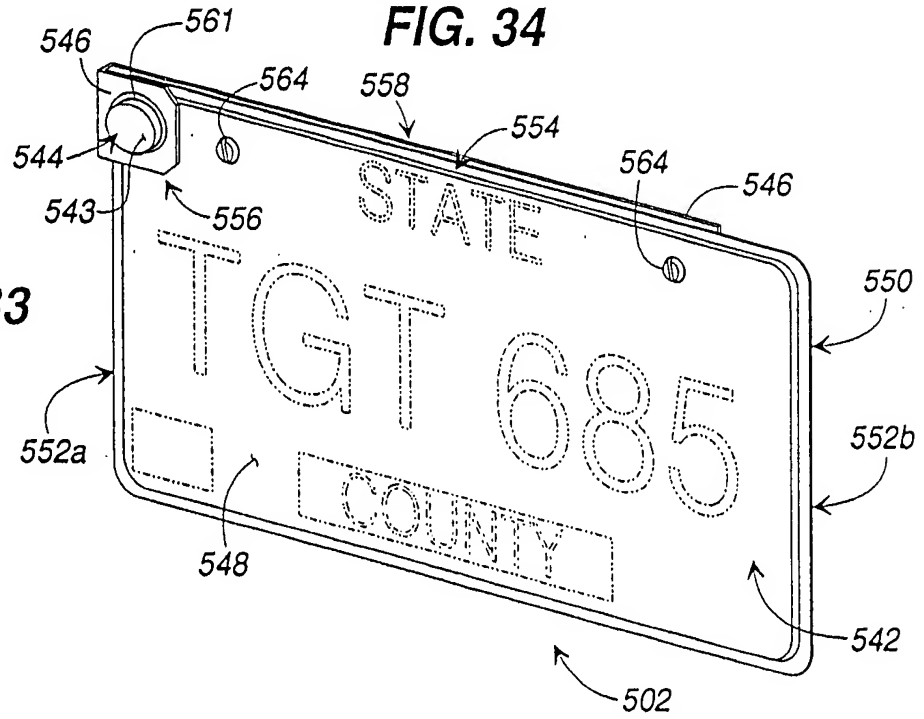


FIG. 33

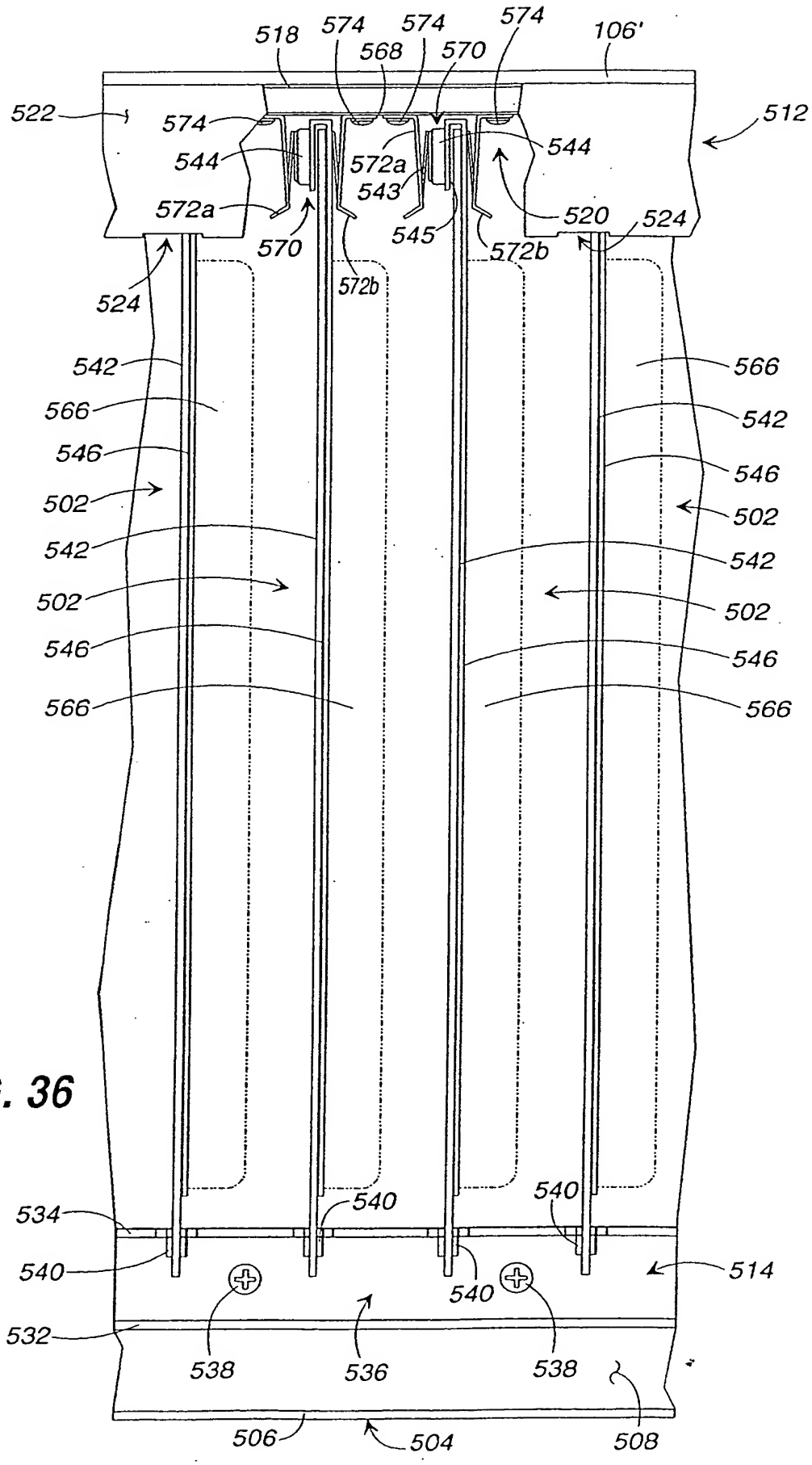

518
574
574
574
106'
568
570
522
574
512
544
544
572a
543
572a
520
524
570
545
572b
572b
524
542
566
566
542
546
546
502
502
542
542
502
502
546
546
566
566
534
540
540
540
514
540
532
538
536
538
506
504
508

FIG. 36

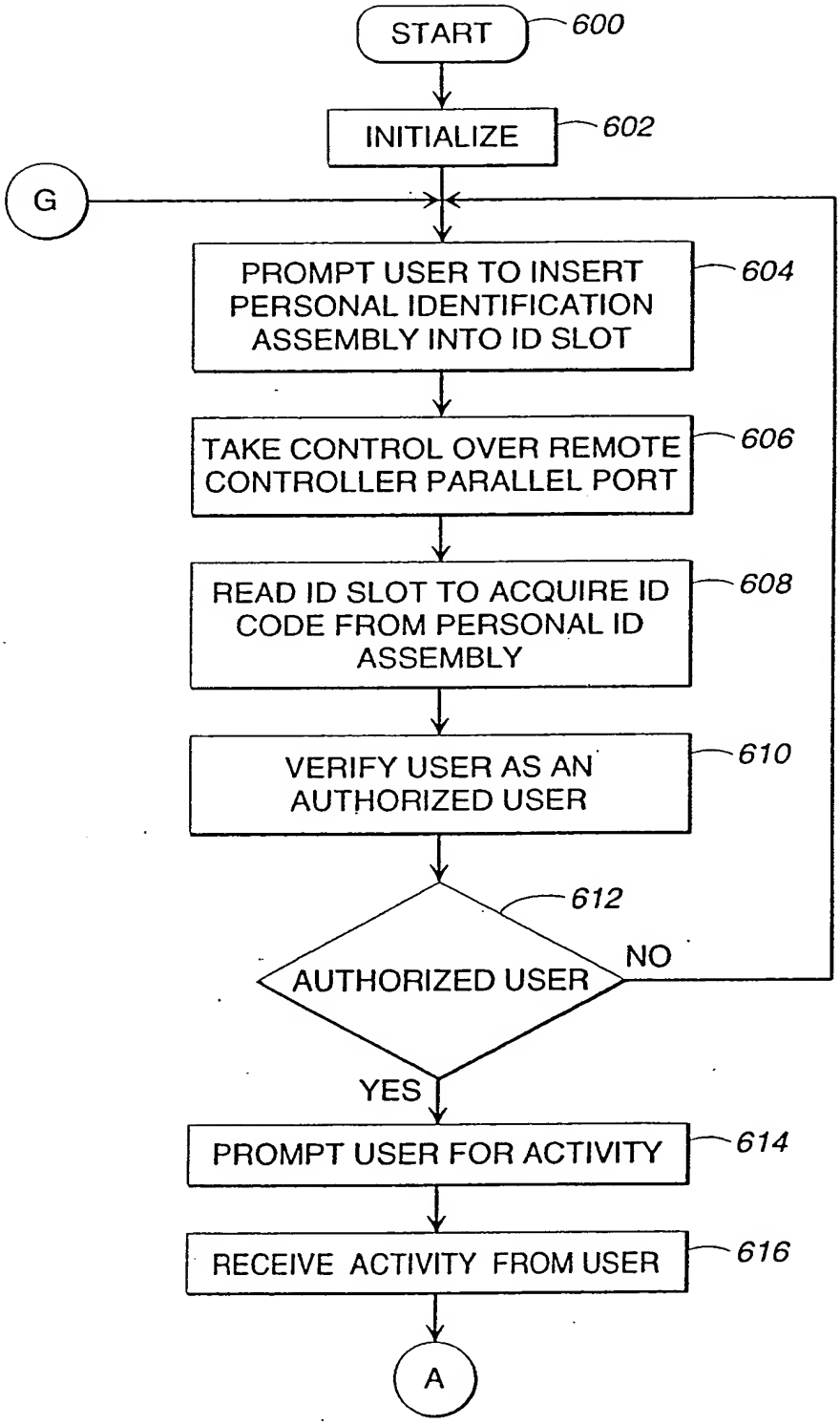

START
600
INITIALIZE
602
G
PROMPT USER TO INSERT PERSONAL IDENTIFICATION ASSEMBLY INTO ID SLOT
604
TAKE CONTROL OVER REMOTE CONTROLLER PARALLEL PORT
606
READ ID SLOT TO ACQUIRE ID CODE FROM PERSONAL ID ASSEMBLY
608
VERIFY USER AS AN AUTHORIZED USER
610
612
AUTHORIZED USER
NO
YES
PROMPT USER FOR ACTIVITY
614
RECEIVE ACTIVITY FROM USER
616
A

FIG. 37A

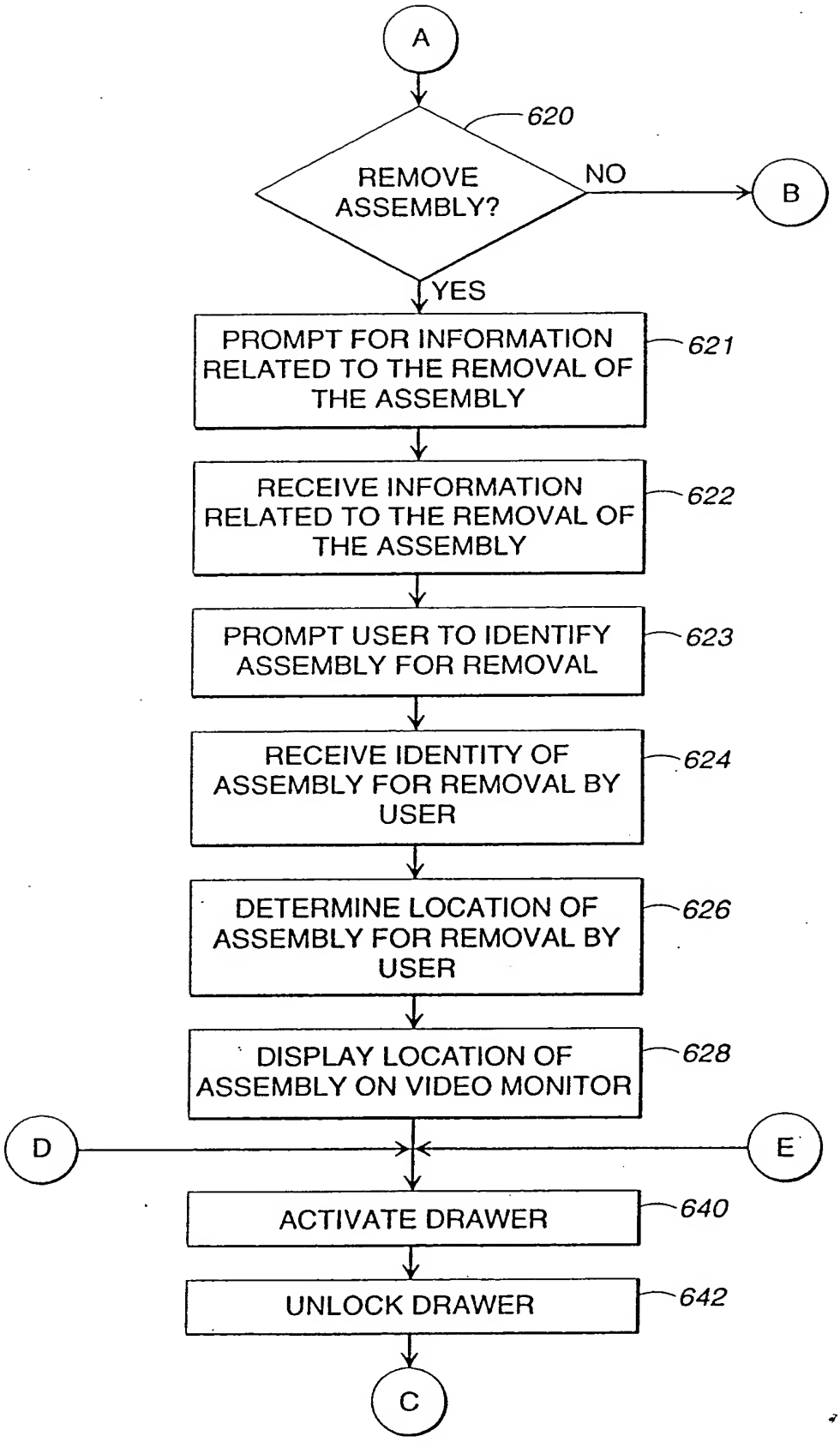

A
620
REMOVE ASSEMBLY?
NO
B
YES
PROMPT FOR INFORMATION RELATED TO THE REMOVAL OF THE ASSEMBLY
621
RECEIVE INFORMATION RELATED TO THE REMOVAL OF THE ASSEMBLY
622
PROMPT USER TO IDENTIFY ASSEMBLY FOR REMOVAL
623
RECEIVE IDENTITY OF ASSEMBLY FOR REMOVAL BY USER
624
DETERMINE LOCATION OF ASSEMBLY FOR REMOVAL BY USER
626
DISPLAY LOCATION OF ASSEMBLY ON VIDEO MONITOR
628
D
E
ACTIVATE DRAWER
640
UNLOCK DRAWER
642
C

FIG. 37B

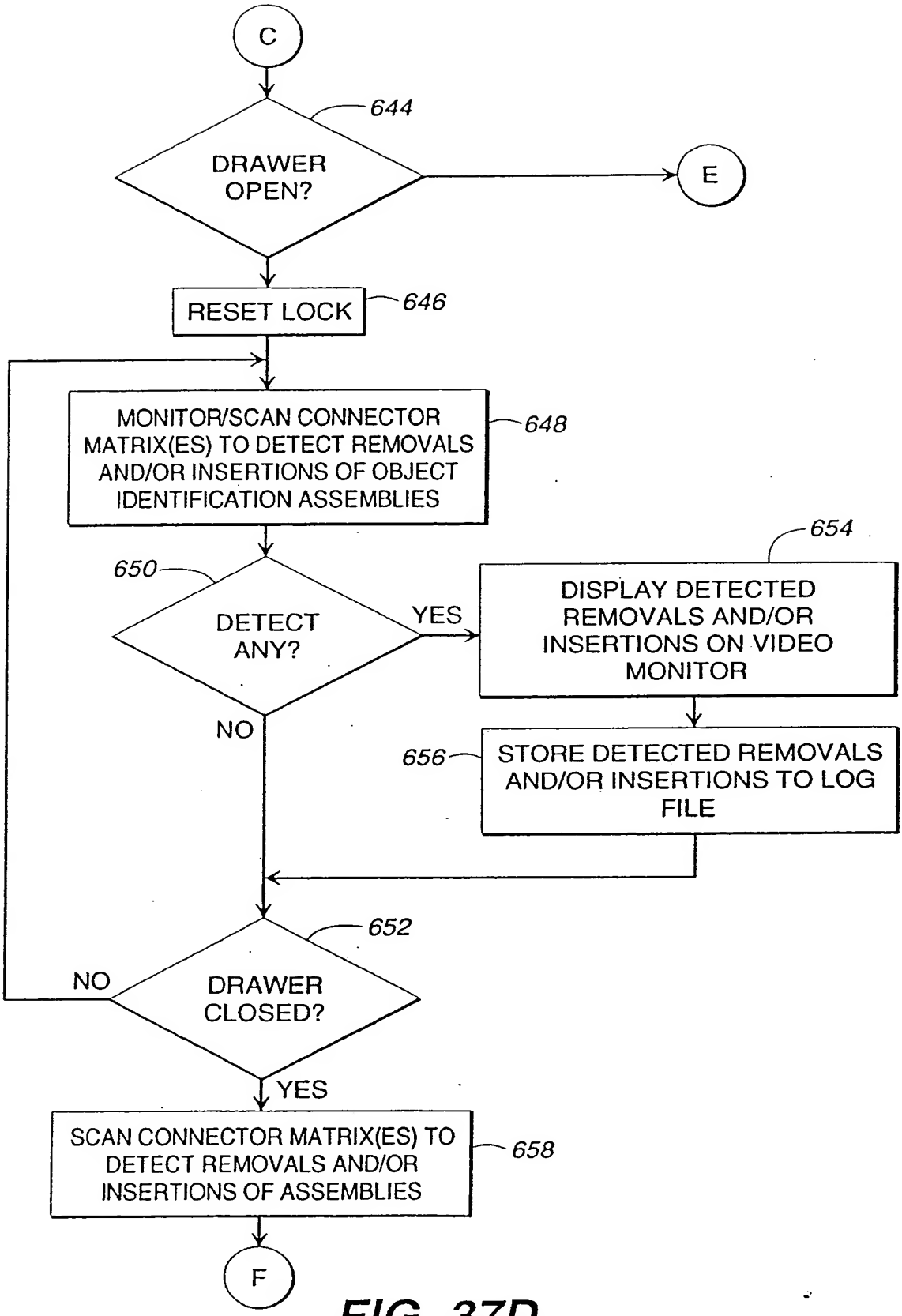

C
644
DRAWER OPEN?
E
RESET LOCK
646
MONITOR/SCAN CONNECTOR MATRIX(ES) TO DETECT REMOVALS AND/OR INSERTIONS OF OBJECT IDENTIFICATION ASSEMBLIES
648
650
DETECT ANY?
YES
654
DISPLAY DETECTED REMOVALS AND/OR INSERTIONS ON VIDEO MONITOR
NO
656
STORE DETECTED REMOVALS AND/OR INSERTIONS TO LOG FILE
652
NO
DRAWER CLOSED?
YES
SCAN CONNECTOR MATRIX(ES) TO DETECT REMOVALS AND/OR INSERTIONS OF ASSEMBLIES
658
F

FIG. 37D

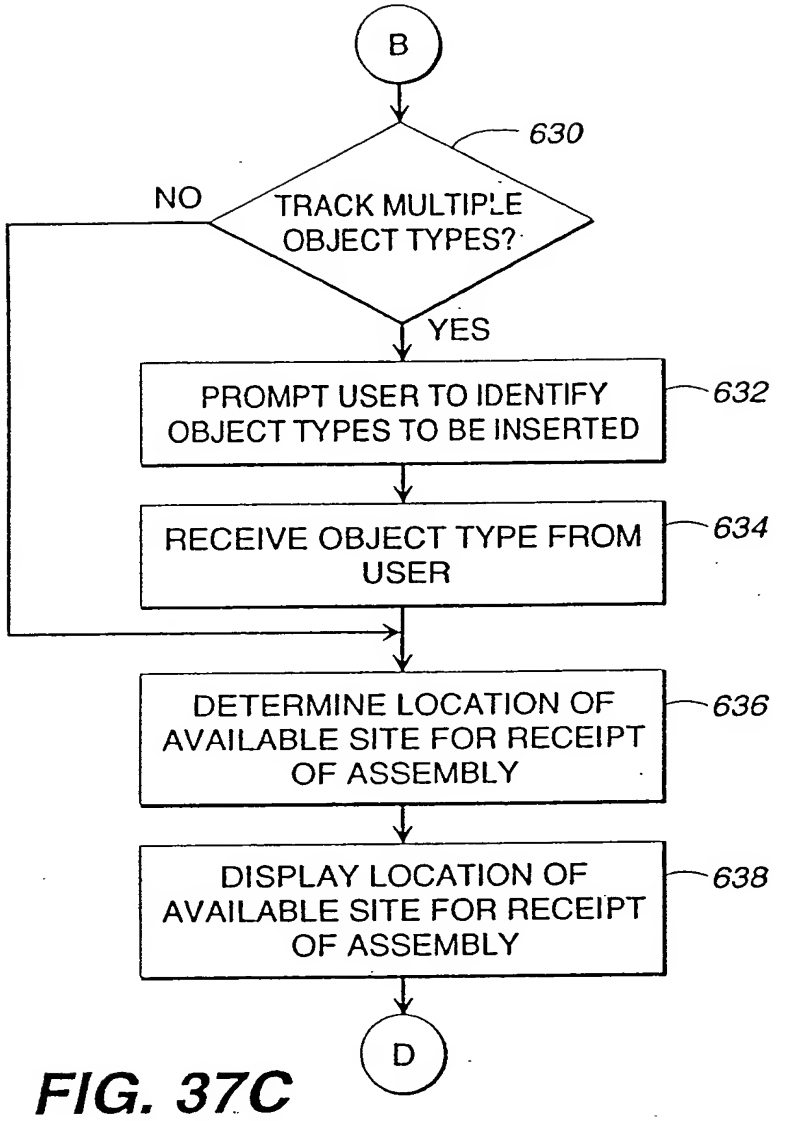


FIG. 37C

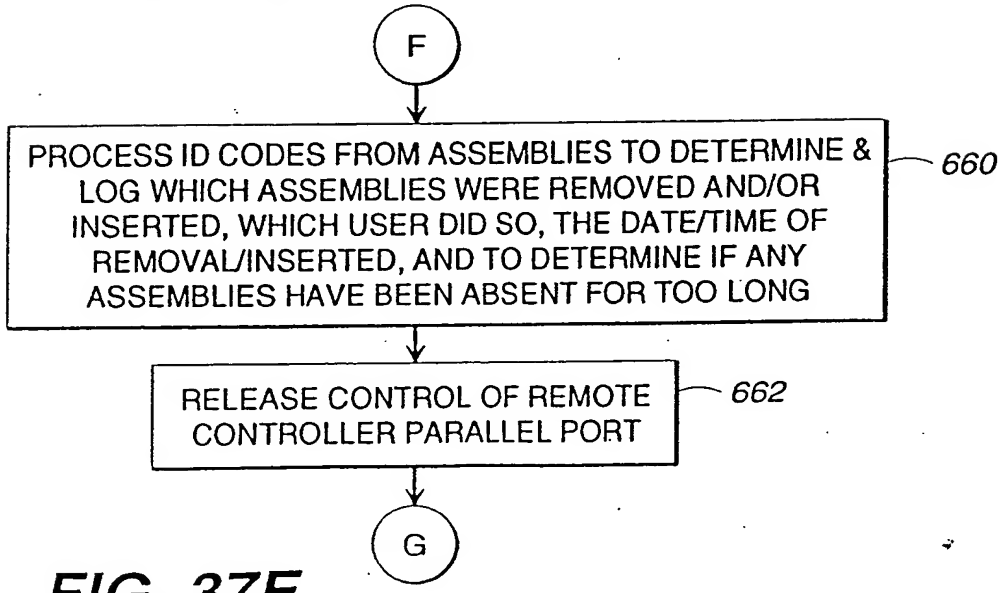


FIG. 37E